

Developing Methodologies for Livelihood Impact Assessment: Experience of the African Wildlife Foundation in East Africa

Caroline Ashley
Karim Hussein

Working Paper 129

Results of research presented in preliminary
form for discussion and critical comment



Working Paper 129

**Developing Methodologies for Livelihood Impact
Assessment:**

**Experience of the African Wildlife Foundation in East
Africa**

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The Sustainable Livelihoods Working Paper Series

This working paper is one of a series that cover practical applications of Sustainable Livelihood (SL) approaches within natural resources management. The papers provide substantial case study material of varied practical experiences, combined with reflection on the emerging findings concerning uses of SL. Some focus on specific types of application of SL approaches (e.g. project design, impact assessment) and some on their application to specific sectors (e.g. water, tourism).

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Summary

This Working Paper describes how key concepts of the Sustainable Livelihoods (SL) approach were incorporated into methods for assessing the impact of wildlife projects in East Africa. It shows that the SL approach can be applied not only to planning new projects, but also to the review of existing ones – even where these were not planned with SL concepts in mind. The working paper explains the rationale for developing an impact assessment methodology incorporating livelihood analysis, summarises the methodology and its application, and identifies several lessons learnt for application of SL approaches.

A methodology for assessing livelihood impacts of projects was developed and has been applied in the first two case studies in Kenya. The assessment used a wide range of data collection techniques and a simplified SL framework to guide analysis and interpretation. The findings provided recommendations to project staff on how to enhance impacts and participation among key target groups, while also feeding into an overview of the effectiveness of development and conservation projects.

Several lessons can be drawn concerning the usefulness and challenges of the SL approach. One of the greatest benefits of the methodology is that, at a very general level, it highlighted the importance of focusing on livelihood priorities within development and conservation projects. More specific advantages of its application can be summarised as: a shift away from narrow project evaluation criteria; a rich contextual and project level analysis; an ability to identify and analyse key assets and activities critical to livelihoods; an analysis that can determine whether a project intervention demonstrates a true or close fit with livelihoods; a basis for practical recommendations to enhance livelihood impacts on and participation of key groups.

However, a number of challenges and methodological issues have emerged: the difficulty in obtaining data that is comparable across contexts; the lack of quantitative results for aggregation to the regional or national level; the need for highly analytical and skilled study teams and difficulties in replicating the methodology. The methodology seems to be more successful in identifying the broad ‘fit’ of project interventions with livelihoods in a particular context than measurable changes in livelihood security and sustainability. The data generated may therefore be more useful at project level than at more macro levels; perhaps a different approach is needed for drawing out broader lessons for national level policy. These difficulties suggest more work is needed to develop ways to apply SL concepts to impact assessment, and to compare and share findings across different initiatives.

**PART A: BACKGROUND AND RATIONALE FOR THE
APPROACH**

1. Introduction

This Working Paper describes how key concepts of the Sustainable Livelihoods (SL) approach were incorporated into methods for assessing the impact of wildlife enterprise projects in East Africa. It shows that the SL approach can be applied not only to planning new projects, but also to the review of existing ones – even where these were not planned with SL concepts in mind.

The paper serves three slightly different purposes: firstly, at the most general level, it demonstrates the relevance of the SL approach to impact assessment. Secondly, it provides a description of the approach and methods used, which may be useful to those developing their own practical methods. Thirdly, it reflects on lessons learnt about how to apply the approach, its strengths and its weaknesses, which have relevance to the wider debate about how to develop practical applications of the SL approach. Different readers may therefore wish to focus on different parts, as outlined by the structure below.

Part A of the working paper seeks to explain the background to the work, and the rationale for developing an impact assessment methodology incorporating livelihood analysis. It explores the contrast between livelihood impact assessment, participatory approaches to monitoring and evaluation and conventional approaches to impact evaluation.

Part B describes the methodology and how it was applied in Kenya. Section 3 briefly summarises the overall approach, key questions asked, analytical approach and resources used. Section 4 provides more detail on methods employed – not in order to provide a ‘model’, but rather to demonstrate the diversity of methods used as well as to share insights into what worked and what did not in this context. Those less interested in the methodological detail will probably wish to skim this section. Section 5 summarises the findings that emerged, showing how they were analysed and disseminated.

Part C reflects on the usefulness of the overall approach, some of the challenges involved in assessing how projects affect livelihoods, and the strengths and weaknesses of the process that was used for developing and sharing the methodology. It identifies lessons that may be relevant to others using the SL approach for similar purposes.

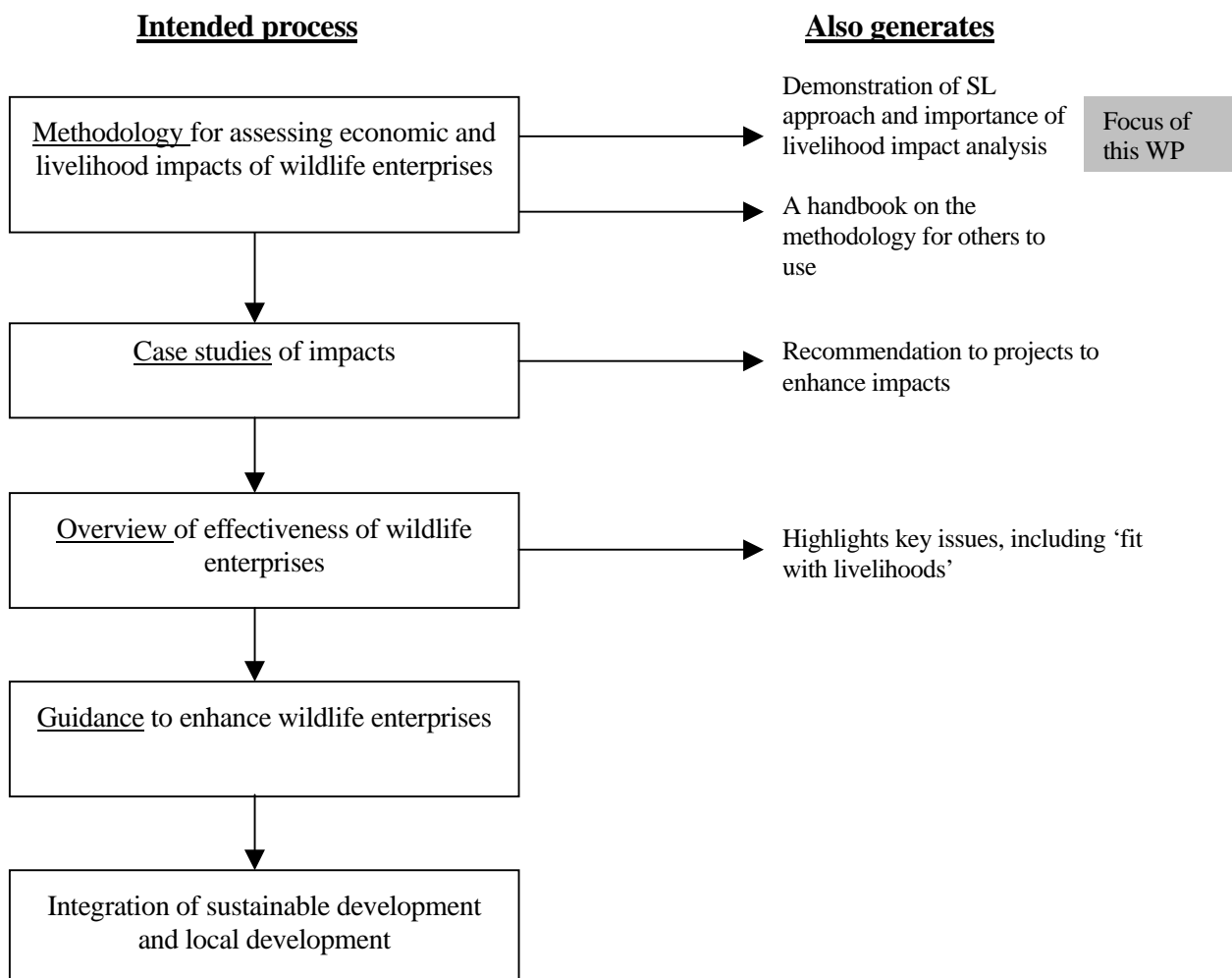
2. Background

2.1 The African Wildlife Foundation project

Across East Africa, and indeed in many other regions, the last decade has seen a mushrooming of ‘development and conservation projects’. These initiatives seek to promote the sustainable use and conservation of resources by contributing to local development and creating economic incentives for conservation by local people. Wildlife enterprises represent a particular sub-set of development and conservation projects. They aim to generate local income from the sustainable use of a wild resource.

In 1997, the African Wildlife Foundation (AWF) established the Wildlife Enterprise and Local Development Project (WELD), with European Union support. One objective of WELD is to review the effectiveness of wildlife enterprises as a conservation and development tool, through assessment and comparison of the local impact of several case study enterprises in East Africa. In order to do this, a common methodology was developed (in 1988). The way in which the methodology fits into the wider project is summarised in Figure 1.

Figure 1 How the methodology fits into broader AWF project objectives



The first two case studies – for which fieldwork was conducted in late 1998 – were both in Kenya:

- Il Ngwesi lodge is a tourism lodge run by a Group Ranch¹ in Laikipia District, near Mount Kenya
- Kipepeo Project is a butterfly-farming enterprise located within the Arabuko Sokoke Forest Conservation project, near the Kenyan coast

Fieldwork has now been completed for two further case studies in Tanzania and will be conducted for a case study in Uganda during early 2000. The methodology itself was further developed during the initial case studies, and was written up in 1999 (Ashley et al., 1999b).

2.2 The need to develop impact assessment methods

Despite much existing work on various aspects of impact assessment, it was deemed necessary to develop a new approach, with a somewhat different focus, for the assessment of wildlife enterprises. There were three main reasons for this.

- Assessment of local development impact often focuses excessively or exclusively on how much *cash*, how much *increased production*, or how many *jobs* are generated, rather than on a broad range of livelihood issues. This is particularly true in conservation and development projects, which have only recently come to embrace wider social issues.
- Project impact assessment tends to be oriented towards internal management issues, focusing on the achievement of existing project objectives, through planned activities. To gain a picture of the broader development and poverty reduction impact of projects, assessments must take a longer-term view, looking at both the intended and unintended consequences of projects across a variety of livelihood concerns. They should also look beyond target beneficiaries to consider all stakeholders.
- Commercial viability is critical if wildlife enterprises are to survive long-term. Commercial aspects must therefore be carefully scrutinised. This is quite different from looking at economic indicators of impact, such as local income streams.

Assessment of local development impact often focuses excessively or exclusively on how much cash, how much increased production, or how many jobs are generated, rather than on a broad range of livelihood issues.

The AWF methodology was designed to answer these concerns. It entails three core strands of analysis: (i) commercial viability; (ii) local financial impact; and (iii) livelihood impact. Stakeholder analysis underpins the whole.

This working paper focuses on the livelihood analysis component, within the context of the broader project. Details of the commercial viability and local financial impact analysis can be found in the methodology handbook.

2.3 Conventional, participatory, and SL approaches to impact assessment

2.3.1 Conventional approaches

Conventional project evaluation usually focuses on assessing whether a project has met its stated (log-frame) objectives and contributed to the achievement of the overall project goal. It uses criteria of project relevance, efficiency, effectiveness, impact and sustainability and looks at both intended and unintended impact. Analysis takes place at set points during the project cycle: during project

¹ A registered group (in this case, comprising around 500 pastoral households) with collective tenure rights over their land.

implementation (mid-term review); at project completion; and several years after completion (ex-post evaluation).

Impact assessment is usually conducted by outside experts. The team tends to work with the indicators that were defined at the start of the project, seeking to collect quantitative data to ensure 'scientific objectivity', comparability and statistically valid samples (though qualitative data collection techniques and checklists are also used). Conventional methods therefore tend to create a degree of distance between those assessing impact and project participants/beneficiaries.

Impact indicators used in conventional conservation impact assessment tend focus on cash/economic issues – because these are considered key to creating incentives for conservation – combined with biophysical indicators (e.g. changes in vegetation, wildlife populations).

2.3.2 Participatory approaches

Participatory monitoring and evaluation (PM&E) is emerging as an alternative to conventional approaches. PM&E makes use of a range of techniques, tools and approaches to assess the impact of development activity (Estrella and Gaventa, 1998). It involves 'local people, development agencies, and policy makers deciding together how progress should be measured and results acted upon' (IDS 1998), allowing intended beneficiaries to contribute to the definition of project 'success'. Indicators are developed through a consultative process with all actors and all are involved in data collection and analysis. Indicators may be both qualitative and quantitative, but PM&E relies to a great extent on qualitative judgements made by local people and project staff rather than on the interpretation of quantitative data by outside experts. Some feel this does not impart enough neutrality to the analysis as villagers selectively share knowledge and speak for their own purposes and objectives.

2.3.3 The livelihoods approach

The livelihoods approach differs from conventional evaluations in its central focus on people's lives rather than on resources or defined project outputs. As we have gained an improved understanding of poverty in recent years, three key facts have been highlighted. First, well-being is not only about increased income. Other dimensions of poverty that must be addressed include food insecurity, social inferiority, exclusion, lack of physical assets, and vulnerability. Second, household poverty is determined by many factors, particularly access to assets and the influence of policies and institutions. Third, livelihood priorities vary; outsiders cannot assume knowledge of the objectives of a given household or group. Project impact assessment must therefore be based upon a prior understanding of people's objectives as well as on an informed view of how their livelihoods are constructed and which factors are the essential causes and manifestations of their poverty.

The sustainable livelihoods (SL) approach to development and poverty reduction tries to take all these concerns into account. It aims to promote development that is sustainable not just ecologically, but also institutionally, socially and economically and to produce genuinely positive livelihood outcomes (rather than concerning themselves with narrow project outcomes, with resources or with output) (Ashley and Carney, 1999). 'A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base' (Carney, 1998).

When it comes to impact assessment, this means that changes in measurables (e.g. cash, yield) must be assessed not in their own right, but in terms of the contribution they make to livelihoods. That

contribution may be *direct* (e.g. adding to income, health, food etc.) or *indirect* (affecting their assets, activities and options, and ability to cope with shocks). Changes in the *way* people live their lives may be just as important as more obvious changes in *what* they achieve. Both are considered within livelihoods assessments. Other key features of such assessments are the emphasis on cross-checking multiple types of data (qualitative and quantitative, subjective and objective) and on assessing both local-level and higher-level (regional, national, international) influences on livelihoods.

Changes in the way people live their lives may be just as important as more obvious changes in what they achieve.

The livelihoods approach draws on aspects of both conventional evaluation and PM&E. As in conventional evaluation, it employs a variety of methods and data types. As in PM&E, it is people-centred and attempts to assess impact based on people's own perspectives. This means that it must use participatory appraisal techniques to work with all stakeholder groups. However, unlike PM&E, the aim of the type of livelihoods assessment described here is for outsiders to learn *from* participants to yield a relatively objective set of information, rather than to enable participants to learn and assess for themselves. The overall framework used to structure data collection and analysis comes from outside, although indicators of impact are developed 'internally'. The approach is therefore not radically participatory; it does not place empowerment at the centre of the agenda for assessing project impact and participatory tools are used as a means rather than an end.²

2.4 What does livelihoods assessment achieve?

There is no set way for conducting a livelihoods assessment, though it is usually important to gain an understanding of three key themes:

- *Current livelihood* strategies, achievements and priorities
- How livelihood strategies and achievements are *influenced by the project*, and what are the key internal and external influencing factors; and
- *Differences between stakeholder groups*

Analysis of this type is *not* likely to conclude that *a specific wildlife enterprise has changed x livelihoods by y percentage in z ways*. Many livelihood improvements are not amenable to quantification. Furthermore, small projects (such as single wildlife enterprise) may not on their own substantially change overall livelihood security or sustainability (except for a few individuals). Nevertheless, analysis can highlight the incremental effect of a project on livelihoods and the aspects of change that are of greatest importance to different groups. Such an understanding can provide:

A single project may not substantially change livelihood security in quantifiable terms. Nevertheless livelihood impact assessment can highlight how it 'fits' with livelihoods, any incremental changes, and how impacts can be enhanced.

- An indication of *positive and negative livelihood impacts* that is more realistic, comprehensive and people-centred than many other approaches (for example cost-benefit analysis);
- An explanation of why and how particular stakeholders *participate* (or fail to); and
- A guide as to how projects might be *re-shaped* to enhance positive impacts, reduce negative impacts and encourage the participation of specific groups.

² Livelihood analysis *can* be combined with more participatory engagement with communities, but this involves a different approach. See Namibian example in Ashley (2000) 'Applying Livelihood Approaches to Natural Resource Management Initiatives: Experiences in Namibia and Kenya', ODI Working Paper 134.

**PART B: THE METHODOLOGY AND ITS
APPLICATION IN KENYA**

3. The AWF impact assessment methodology

3.1 The overall approach

This section begins by describing the overall AWF methodology for impact assessment. It follows with discussion of the specific components focused on livelihood impacts.

The impact assessment was conducted in distinct stages:

Step 1: getting started and planning the process

Step 2: information gathering

Step 3: analysis and interpretation

Step 4: presentation and dissemination of the findings

8 key questions were identified to define the scope of the review, as listed in Table 1. The first 6 questions – covering stakeholder differences, commercial viability, local income streams and livelihood impacts – are intended to provide the basis for answering the last 2, on the overall development and conservation impact of the enterprise.

3.2 Assessing livelihood impact

The aim of a livelihoods assessment is to gain an understanding of the significance of the project to the livelihoods of project participants and other local residents. Such an assessment is based on the premise that the project and project participants shared a core aim: the enhancement of local people's livelihoods.

The livelihood impact assessment is one part, but a major part, of the overall review. Of the 8 questions listed, questions 4 and 5 – livelihood impacts on participants and non-participants – explicitly focus on livelihoods. But the livelihood impact assessment also draws on two other questions – who are the stakeholders and what are the financial impacts (Q 1 and 3). The analysis of livelihood impacts is the main way of drawing conclusions about the development impact (Q 7) of the project.#

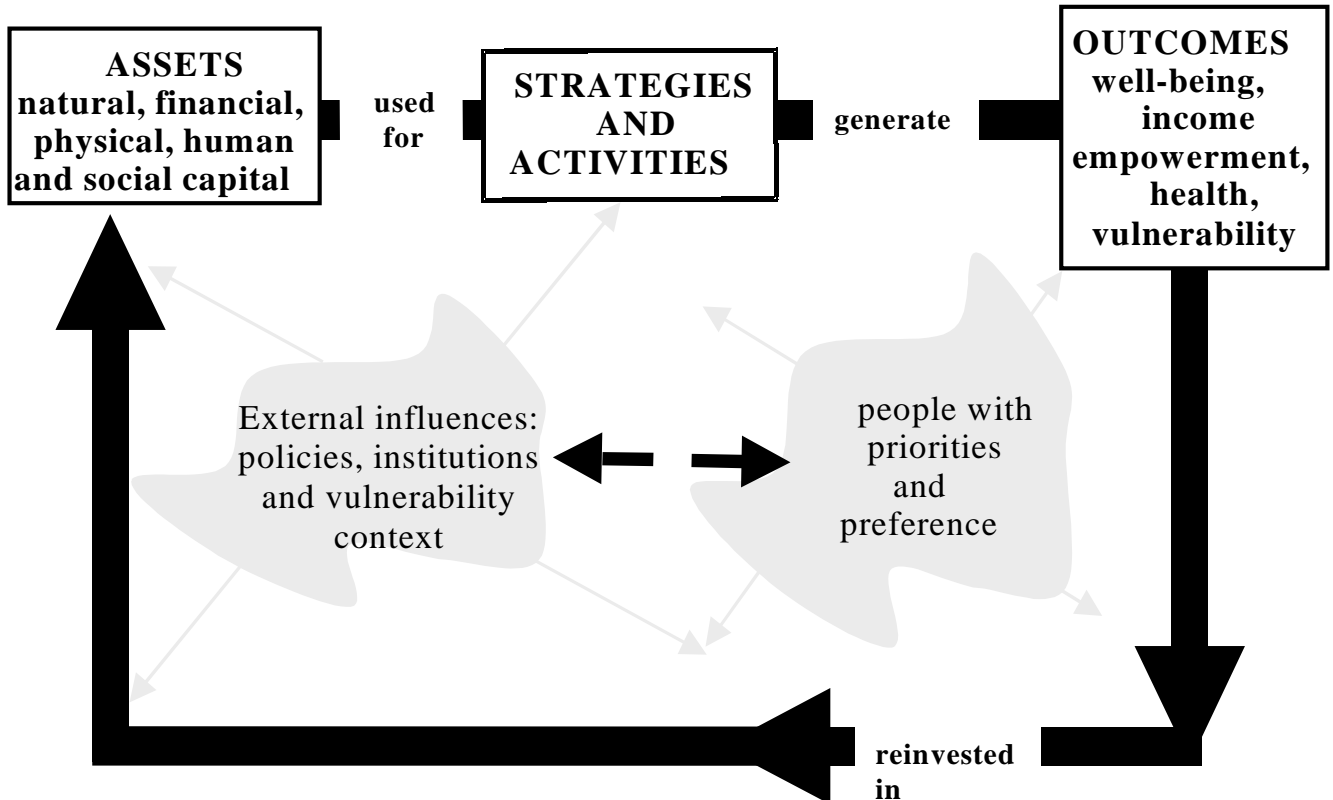
Within the livelihoods assessment, there are three key themes to explore:

- (i) An overview of livelihood strategies and priorities
- (ii) The various impacts of the project on livelihoods
- (iii) Differences between stakeholders in livelihood impacts

Table 1 The eight questions of the overall review

| QUESTIONS | NOTES |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Who are the stakeholders in the project? | <p>The distribution of costs and benefits (e.g. between rich and poor, men and women) is an important consideration when judging developmental impact.</p> <ul style="list-style-type: none"> • Identify main groups of people involved in and affected by the enterprise. • Classify those with common interests into <i>stakeholder groups</i>. For example, direct participants (e.g. owners, workers, customers), non-participants affected by the enterprise (e.g. local residents), and those who may influence the project (e.g. government). • If necessary, further divide stakeholder groups, depending on factors such as scale and types of benefits achieved. |
| 2. Is the enterprise commercially viable? | <p>This issue is essential to the AWF methodology due to the exclusive focus on wildlife enterprises.</p> <ul style="list-style-type: none"> • Assess past and potential commercial performance. If the enterprise is not flourishing, why? If it is receiving indirect subsidies, would it be viable without these? |
| 3. What is the financial impact of the enterprise on local people? | <p>This is a key concern when assessing developmental impact of a project. Financial analysis should consider the benefits to different stakeholder groups and how significant these are to their overall livelihoods. Estimate:</p> <ol style="list-style-type: none"> (i) Wages earned by workers; (ii) Casual earnings from sales of project-related goods, informal sector activity and casual labour (iii) Collective community income earned from lease fees (which may be distributed as a household dividend); (iv) Profits accruing to enterprise owners (private or the community). |
| 4. What is the livelihood impact for local participants? | <p>The following types of impact should be assessed:</p> <ul style="list-style-type: none"> • Tangible (e.g. income) and intangible (e.g. empowerment) • Direct (e.g. new services) and indirect (e.g. impact on other activities) • Positive and negative • Intended and unintended |
| 5. What is the impact on non-participating local residents? | <p>The effect of the project on non-participants might be significant in the overall calculation of development and conservation impact. Explore:</p> <ul style="list-style-type: none"> • Positive impact (e.g. multiplier effects of participants' earnings, increased recognition of the area by decision-makers, improved access to market or infrastructure); and • Negative impact (lost access to natural resources used by the enterprise, diversion of resources, increased conflict). |
| 6. What is the impact of – and on – government bodies, NGOs, private sector, & other external stakeholders? | <p>It is essential to consider the role of other stakeholders who can either obstruct or support the enterprise.</p> <ul style="list-style-type: none"> • How do external stakeholders benefit or lose from the project and how does this shape their contribution? • How do they affect the nature and scale of project impact on local people? |
| 7. What is the overall developmental impact? | <p>Can the enterprise be said to be contributing to development? In what way?</p> <ul style="list-style-type: none"> • Drawing on the responses to the previous questions: identify the main positive and negative impacts, their distribution between stakeholder groups, key factors affecting impact, and the significance of those impacts in the development context. |
| 8. What is the likely contribution of the enterprise to conservation? | <p>Is the enterprise contributing – or likely to contribute – to conservation of natural resources in the area?</p> <ul style="list-style-type: none"> • What is the 'conservation logic' of the enterprise? • What are the trade-offs or complementarities between development, conservation, and financial sustainability objectives? |

Box 1 A simplified sustainable livelihoods framework



Source: C. Ashley, adapted from DFID (1999) Guidance Sheets and Carney (1998)

The key framework components are:

Assets or capital endowments (physical capital; financial assets; natural capital; social capital, human capital). These are the basic livelihood building blocks. Poverty analyses have shown that people's ability to escape from poverty is critically dependent on their access to assets (Booth et al., 1998). Both quality and quantity of assets matter, along with the options to convert assets into productive activities.

Livelihood activities: what people do. Poor people usually pursue a diverse portfolio of activities, including on-farm activities, off-farm activities and migration.

Outcomes: components of improved livelihoods or well-being³ (e.g. good health, more income, reduced vulnerability, empowerment, food security, more sustainable use of the natural resource base). These are what people are trying to achieve through their activities.

External influences. Institutions, organisations and policies that affect the assets and opportunities that are available, and their productivity: e.g. government policy, formal organisations (farmers' groups, local authority) and informal institutions, which include societal rules and norms (market networks, credit systems, discrimination)⁴ and access to markets.

Context: the context is the external environment in which people operate. The natural, demographic and economic context shapes people's access to assets, and shocks and trends tend to increase their vulnerability.

People's strategies, priorities and preferences. People's own priorities help shape their livelihoods. 'Strategies' may never be articulated, but they nevertheless influence people's choice of which activities to combine, which outcomes to pursue, and which assets to invest in. For example, reducing vulnerability and coping with drought may be priority strategies for some, investing in family education a priority for others.

The various components of livelihoods are closely inter-related; change in one often leads to change in others. Understanding such dynamic effects are a key challenge of the SL approach that is not adequately reflected in the two-dimensional framework.

³ It is difficult to summarise in one phrase the overall goal to which outcomes contribute. 'Livelihood security' is perhaps the best shorthand for goals of poor people, and is used here for brevity. But this emphasises the tangible issues and risks under-emphasising empowerment aims. The livelihoods framework developed for DFID focuses on 'sustainable livelihoods' in response to DFID interests, but it points out that 'outcomes' are not the same as objectives' precisely because local people and DFID have different objectives (DFID, 1999). Perhaps the strength of the livelihoods framework is that it does not assume one overall goal, but recognises different outcomes, and suggests that the desired change is to enhance all the different elements and their links, not just one box or summary phrase.

⁴ Terms and definitions vary in the literature. Scoones (1998) uses 'organisations and institutions' which roughly correlates with Carney's (1998) 'transforming structures and processes'. These are now being renamed by DFID as 'policies, institutions and processes'. The key point is that external influences are not just formal bodies (e.g. councils), nor just the policy framework which is set largely by government, but includes the way things are done locally, markets, cultural norms etc.

The approach taken by the AWF made use of a sustainable livelihoods framework (Box 1) – based on a fuller version of such a framework used by the UK Department for International Development (DFID, 1999). The framework provides an analytical structure, highlighting key components of livelihoods against which project impact can be assessed, and making the complexity of livelihoods more manageable. The assumption is that people pursue a range of *livelihood outcomes* (for example better health, increased income, and reduced vulnerability) by drawing on a range of *assets* to undertake a variety of *activities*. The activities they adopt and the way in which they reinvest in assets is driven in part by their own *preferences* and priorities. However, it is also strongly influenced by the *context* (e.g. climate, population and the effects of changes in these) and by external *policies and institutions*. These policies and institutions have a critical influence on people's access to assets and livelihood opportunities.

The framework provides an analytical structure, highlighting key components of livelihoods against which project impact can be assessed.

The livelihoods framework yields up a common set of questions such as:

- What are people's livelihood priorities, and which of these is the project meeting?
- What are the diverse, positive and negative, short-term and long-term ways in which the project activities affect the livelihoods of target groups?
- How are activities affecting – and affected by – the transforming structures and processes that shape people's livelihood options?
- How do the livelihood strategies of different groups affect the way they participate in, or are affected by, the project?
- How can activities be adapted in order to enhance livelihood impacts on target groups while remaining consistent with other objectives?

The components of livelihood impact assessment are summarised in Figure 2 and described in the following sections, in terms of:

- The three themes to explore – these are discussed next
- The various methods of collecting data – discussed in Section 4
- Analysis of results through a livelihoods lens, interpretation of findings and conclusions – discussed in Section 5

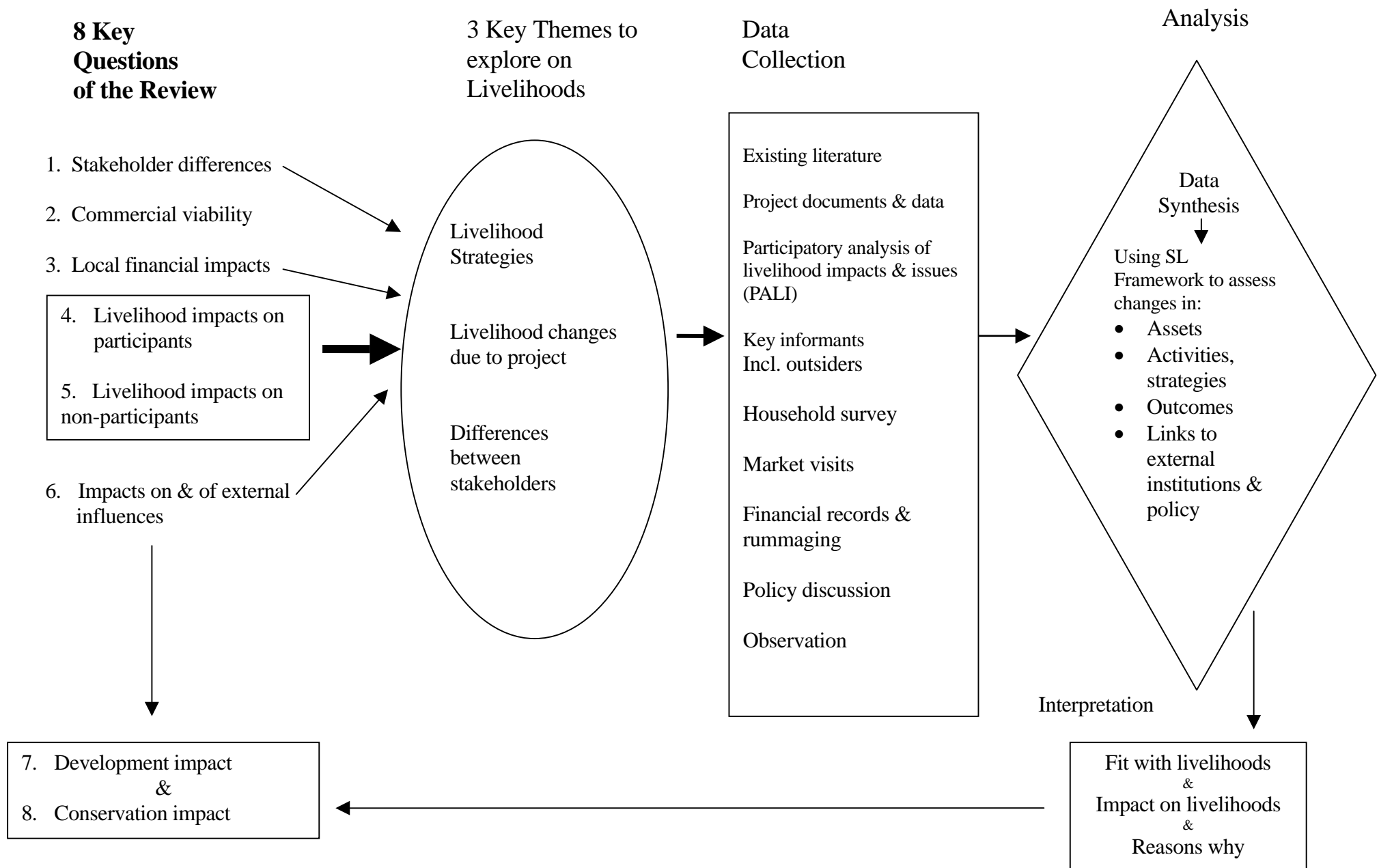
3.2.1 Background understanding of local livelihoods.

The first step in answering these questions was to gain an adequate understanding of local livelihoods:

- What outcomes do people achieve? What activities do they pursue and in what ways do these contribute to livelihoods? What assets do they have? What are the underlying priorities and preferences that influence household livelihood strategies?
- How do external forces shape people's options, and can people themselves influence the external forces?
- How and why are livelihoods changing? Which changes are due to shocks or externally driven trends? Which changes are short-term 'coping' strategies, and which are long-term 'adaptive' strategies (adapting to either new opportunities or constraints)? (Scoones, 1998).
- Which improvements (in assets, outcomes or activities) do people value most? What changes in the external environment would help? What criteria do people use when judging options?

When developing such an understanding it was found to be important to limit general analysis (which can otherwise become interminable and very expensive). After gaining an adequate understanding of

Figure 2 Summary of the process of livelihood impact analysis



core livelihood components, effort should be made to focus on how livelihoods were changed or influenced by the project. Sometimes this change can be quantified, but more often it is the *direction* and *type* of change that are important. There may seem to be little scope for the ‘optimal ignorance’ called for by Chambers (1995) in understanding complex livelihoods, but in fact the principle – of ignoring what you do not absolutely need to know – remains important.

3.2.2 Identifying changes in livelihoods

The next step is to consider project impact on livelihoods. This begins with an assessment of the widest possible range of impacts and who might be affected. The different types of impact can be linked to the various elements of the livelihoods framework such as impact on assets, impact on other activities etc. Table 2 gives the more detailed questions that need to be addressed in this process and which guided the planning and analysis of the case studies.

Table 2 SL components and key research issues

| Key components of SL framework | Issues to explore |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Assets and capital endowments</p> <ul style="list-style-type: none"> - Human capital - Physical capital - Financial assets - Social capital - Natural capital | <p><i>Impact on assets:</i></p> <ul style="list-style-type: none"> • Does the enterprise affect access to assets, or change their quality or productivity? • If natural resources are used, are they used sustainably? • Does it strengthen or undermine community co-operation and institutions, particularly institutions for common property resource management? • Does it change access to social networks of households or the broader community? • Does it change the community’s relations with the outside world, in terms of influence, co-operation or conflict? • Are cash earnings invested in human capital (education, health) or other reserves (financial, physical assets)? Are skills acquired that enhance human capital? • Are assets used up in the enterprise activity? • How significant are these impacts on assets compared to other sources of change/investment? |
| <p>Multiple livelihood activities</p> <ul style="list-style-type: none"> - On farm - Off farm - Migration - Etc. | <p><i>Conflicts and complementarities with other activities⁵:</i></p> <ul style="list-style-type: none"> • Is time spent on this enterprise taken away from other activities? • Do enterprise activities conflict with or complement the seasonal timetable of other existing activities? • Is there competition for inputs (e.g. land, resources) between the wildlife enterprise and other activities (i.e. what is the opportunity cost)? • Does the enterprise develop complementary skills, assets, markets that can enhance other activities? • Does it damage other activities (e.g. wildlife damage to agriculture)? |
| <p>Outcomes (or components of improved livelihoods)</p> <ul style="list-style-type: none"> - Improved well-being (health, education...) - Increased income - Less vulnerability | <p><i>Direct contribution to outcomes:</i></p> <ul style="list-style-type: none"> • How does the enterprise contribute directly to improved livelihood outcomes e.g. cash, food, physical security, empowerment, sustainability? • How significant is the contribution compared to other sources e.g. how do cash earnings compare with other sources of cash? What is the value in terms of what can be bought? Is the timing of earnings of any significance? |

⁵ Some of this may already be covered under impacts on assets – e.g. on labour availability, land – but it is still necessary to consider how this affects other activities.

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> - Empowerment - More sustainable use of natural resources | |
| <p>People's strategies, priorities and preferences</p> | <p><i>'Fit' with livelihood strategies and priorities:</i></p> <ul style="list-style-type: none"> • Does the enterprise match the strategies that people use when selecting and combining activities e.g. minimising risk, coping with drought, diversifying, keeping assets liquid, maintaining flexibility? |
| <p>Context</p> <ul style="list-style-type: none"> - Natural, economic and demographic context | <p><i>Relevance to the context:</i></p> <ul style="list-style-type: none"> • Does the enterprise change people's ability to cope with shocks or capitalise on positive trends? • Does it help people 'cope' with temporary change, or 'adapt' to a permanent change? • How does it relate to long-term trends – does it counter or amplify them? |
| <p>External influences: organisations, institutions, policies</p> | <p><i>Impacts on and of external influences:</i></p> <ul style="list-style-type: none"> • Does the enterprise affect any of the external forces – organisations, institutions, policies markets, and social norms – that influence local livelihoods? • Does it change policies or behaviour of others towards local residents? • Does it change local people's access to institutions and their influence over them? • How does the policy, institutional and political environment influence the project and its impacts? (e.g. what is the role of political culture, power differences, institutional structures?) • How does the policy and institutional environment affect the sustainability of project impacts? |
| <p>Sustainability</p> <ul style="list-style-type: none"> - Resilience in the face of external shocks - Not dependent on external support - Not compromising the livelihoods of others or the NR base | <p><i>Impact on sustainability:</i></p> <ul style="list-style-type: none"> • Does the enterprise affect the sustainability of the natural resource base? • Is the activity financially sustainable? • Are people more or less dependent on outsiders? • If dependent, is the outsiders' role sustainable in the long-term? |
| <p>Links between the components, dynamic change</p> | <p>Does the enterprise affect how households invest their incomes into assets, or how external institutions influence household opportunities? Does it change the underlying household priorities that shape the livelihoods framework? How does it affect livelihood trends and processes of change?</p> |

In addition to addressing the questions posed in Table 2, it was also found to be important to:

- *Distinguish between short-term and long-term impact:* which changes are immediate, which occur only over time, which are hoped for but not yet evident? Which changes are temporary and which permanent?
- *Assess differences between stakeholders:* who is affected, in what ways, and why? Overall impact for different stakeholder groups can be analysed separately.
- *Identify key factors that influence the type and scale of impacts:* how the project is structured can influence impact, as can the policy environment (e.g. tenure or credit policies), institutional issues (e.g. the power balance between local institutions) and natural conditions (e.g. climate and seasonality). It can be useful to distinguish between factors that cannot readily be changed (e.g. poor women's lack of time to participate, the external/policy environment) and those that are more amenable to change (e.g. factors directly relating to project implementation).
- *Assess the overall significance of different types of impact:* this entails addressing issues of: (i) scale of impact with respect to the inputs invested (money, time, labour); (ii) relative contribution

of the impact to livelihood sustainability and security (in comparison with other options); and (iii) the value different people attribute to the impact.

- *Pay attention to relevance:* not all the questions will be relevant in each situation; a key role of the researcher is to identify the less relevant issues and the more important but less obvious ones. For some questions the fact that there is *minimal impact* can itself be significant. For example, butterfly farming involves little time input – what labour is required is done in short bursts by family members. This means that there are few trade-offs with other activities – an advantage that other income-generating opportunities do not offer.

An underlying issue – common to all impact assessments – is how to attribute causality with any certainty? Which outcomes can be directly attributed to project activity and which are the result of a range of other factors? This will be based on the subjective views of both participants and the evaluation team. Certainly, many livelihood impacts become evident only over time. An assessment done at the end of the project, or some time afterwards, will be more robust and comprehensive. But the methodology can also be applied during project implementation, so that emerging trends and pressure points can be identified.

It is important not to be restricted by the use of an SL framework. Some critical issues, such as empowerment, appear only obliquely in the framework yet they must be addressed head-on.

3.2.3 Assessing empowerment

Empowerment⁶ can be defined in various ways, but it is essentially people *taking control of the development process*. In the AWF methodology, empowerment issues were considered at three overlapping levels⁷:

- 1) Empowerment of *individuals*, particularly people marginalised within their communities (e.g. women, the poorest);
- 2) Strengthening of *community organisations* and their capacity to work together for common objectives (e.g. for common property resource management); and
- 3) Strengthening of a *community in its relations with outsiders* and the wider society (including political authorities and central government).

3.2.4 Assessing differences between stakeholders

The complexity of livelihoods makes it unlikely that there will be a generalised ‘solution’ to meet everyone’s needs. (This conclusion was echoed in an assessment of livelihoods in differentiated communities in rural Mali (Brock, 1999)). The AWF methodology therefore places a strong emphasis on integrating stakeholder analysis with livelihood assessment.

Stakeholder analysis must underpin the livelihood impact assessment.

In both the Kenyan case studies, key stakeholder groups were defined at the start, with the analysis being refined as more information was gathered. Similar issues were discussed with different types of

⁶ Empowerment and livelihood security – both key components of the development process – can be viewed as two, mutually-reinforcing sides of the same coin. The SL approach encompasses both, but use of the SL framework can tend to place greater emphasis on the more tangible issues of security.

⁷ These relate to two types of social capital identified in a recent study World Bank study, which found that household income correlated with a household’s *own* social capital, and also with the social capital *of the community* (irrespective of their own) (Narayan and Pritchett, 1997). The middle level proposed here (community organisation) falls between these two, in that it strengthens key networks to which local households belong, and also provides the basis on which the community can strengthen its external links.

stakeholders for purposes of comparison, and survey data was disaggregated between groups. In addition, differences between stakeholders were discussed directly with participants.

The methodology distinguishes between local and ‘external’ stakeholders and within each, between participants and non-participants. The main stakeholder group – local participants – was further disaggregated. Criteria for disaggregation can vary (as shown in Box 2), but in addition to usual socio-economic and gender distinctives, it was important to define stakeholder groups by degree and type of involvement in the enterprise, as the examples in Box 2 show.

Box 2 Stakeholder categories and livelihood impacts at Il Ngwesi and Arabuko Sokoke

The Arabuko Sokoke case study assessed livelihood impacts on butterfly farmers.

- A key division which permeated all the analysis, was between large producers and small/medium producers, as their investment in the enterprise and gains from it were markedly different.
- For some issues, but only where relevant, differences in perspective were also noted between men and women, adults and children, rich and poor, and between the registered family member and other family members who farm butterflies.

The Il Ngwesi Lodge case study defined stakeholder groups both by function/involvement and geography.

- Those closely involved were distinguished from the majority of Group Ranch members. Direct participants experience quite different livelihood impacts (particularly cash incomes) to other members who are affected mainly by changes in Group Ranch assets.
- Direct participants were then sub-divided by function: full-time workers, casual workers, decision-makers, local entrepreneurs. Within these, the involvement of women was specifically assessed.
- Group Ranch members as a whole were categorised mainly by neighbourhood, as location strongly determines type of involvement in and impact of the lodge.

Different approaches to wealth ranking were adopted in the two cases; neither proved particularly insightful. At Il Ngwesi it was intuitively evident, rather than proven, that the better off households gained jobs and positions of influence. At Arabuko Sokoke possible correlations between wealth and participation were inconclusive. Nevertheless, the significance of costs and benefits was interpreted differently for richer and poorer households.

It was also important to set participants in the context of the wider communities to which they belong. At Il Ngwesi, the beneficiaries were, broadly speaking, ‘the community’ – i.e. all members of the group ranch. At Arabuko Sokoke, participants were a sub-section of the wider community, representing a minority from several different villages. It was important to assess the links with the community to understand overall conservation impact.

It is also important to distinguish between groups with different livelihood needs/strategies. In almost every case, residents will have different stakes according to gender, socio-economic status (rich/secure, poor/insecure) and location. While groups distinguished by these factors may do similar things in an enterprise or receive similar benefits, it is highly likely that they will attribute different *significance* to these activities/benefits, because of their differing priorities and livelihood strategies. For example, at Arabuko Sokoke, the fact that butterfly farming is done at home is an advantage for *all* farmers, but it is particularly significant for *women* who generally have to combine income-earning with domestic duties. Likewise, all farmers suffer from the fact that earnings from butterflies are unreliable, but this is a particular cost and barrier to the poor, who can least afford to take risks.

3.3 Resource implications

This methodology was developed and the case studies conducted largely by and for NGOs. The projects examined tended to be relatively small in scale. And although the AWF is large by NGO standards, and therefore able to invest a reasonable amount in the assessments, its resources and skills are still limited compared with those of DFID or other major donors.

For each of the first two case studies, the core research team comprised three AWF staff (AWF's Ugandan WELD Project Officer, AWF's Kenyan (Maasai) Community Conservation Officer, and the AWF expatriate Conservation, Economics and Commerce (CEC) Programme Director), plus an overseas consultant (ODI Fellow and main author of this Working Paper), and an AWF Canadian Intern. The team combined skills from different disciplines, including: commercial analysis, economics, social development, participatory techniques, quantitative data analysis, local language skills, management, synthesis, writing and editing. It was particularly important for team members to have the ability to apply the methodology flexibly (not as a blueprint) using both quantitative and qualitative data. It was also important that they had strong analytical skills and an ability to triangulate information to arrive at a coherent analysis of complex situations.

The time inputs for the first two case studies were particularly high because of the learning process and necessary investment in methodology and skills development. Two to three field visits were made to each site. The main visit lasted for 7–10 days and involved three of the core team members. The case study material was analysed and written up largely by the AWF Ugandan graduate together with the overseas consultant. Assistance with management and editing was provided by the AWF CEC Director.

The use of an SL approach clearly has resource implications, in terms of time, staff numbers, staff skills and training etc. (see Box 3). The approach requires additional resources to be invested in:

- Developing the team's familiarity with the SL approach
- Using a wide range of qualitative and quantitative techniques; and
- Analysing results to make best use of a wide range of material

But SL analysis was just one component of the AWF methodology. The integration of livelihood analysis with financial and commercial analysis required additional expertise and technical input.

In assessing the cost of implementing the methodology, it is important to recognise not only costs to the agency but also those incurred by local people and institutions (for similar issues relating to PRA, see Goyder et al., 1998; Abbott and Guijt, 1997). In both case studies, the fieldwork included several days of PRA-type work with different groups. At Il Ngwesi a local leader attended all meetings, and at Arabuko Sokoke, one to three local project staff joined the team each day (partly as a learning exercise for themselves).

Ensuring the cost effectiveness of applying the methodology has two elements – minimising costs, but also maximising effectiveness, i.e. *if you're going to do it, do it well enough to be useful*. This means learning from mistakes and weaknesses, and investing sufficient time in analysis and dissemination – a point to which we shall return below.

Applying the methodology required team skills in a variety of field methods, ability to adapt them, synthesis of different types of data, and strong analytical skills. Extra time was needed for building familiarity with SL approaches and doing the analysis.

Box 3 Resource demands of SL analysis in Mali

Brock notes that in her use of the SL framework in Mali it was necessary to limit the analysis and themes covered by the study due to time limitations. For example, she states that even in a field study lasting the best part of a year there was not enough time to gather important and relevant agricultural and land use change data (Brock 1999:6).

Key problems raised by her use of an SL approach included:

- That a large quantity of detailed and complex data were generated, despite determined attempts to stick to the principle of optimum ignorance;
- That the combination of methods led to the collection of different kinds of data, requiring different kinds of analysis, which were hard to co-ordinate;
- That post fieldwork analysis was lengthy and outputs were not timely.

She concludes that 'for research to be policy-relevant, the length of time needed and methods used for analysis needs to be considered in the context of resource constraints' (Brock 1999: 13).

4. Data collection methods

4.1 A broad range of methods

This section reviews the methods and tools used in the field to carry out the livelihoods impact assessment. Some general guidance that applies to all evaluations (whether SL-focused or not) is included, where this was found to be particularly important in applying the methodology. Despite the focus here on presenting a range of data collection methods and tools, it should be noted that good planning in advance (see Box 4), and the quality of data analysis and interpretation after fieldwork are the key ingredients of a successful assessment.

There are many different sources of information, each of which can shed light on the three key themes that were being explored: livelihood strategies and priorities; impacts of the project on livelihoods; and differences between stakeholders.

- *Existing literature*: This should be collected and reviewed before the fieldwork starts (while seizing opportunities to gather more material during fieldwork visits). Reports written to inform other sectors can provide invaluable background information on livelihoods.
- *Interviews with individuals*: Semi-structured interviews with individuals can provide the type of important detail that often gets lost in a group meeting (for example, who does what in the household, time input to activities, income/expenditure items). During the case studies it proved particularly useful to conduct one-to-one interviews around the fringe of group meetings to follow-up on key issues as they emerged. Key informants should include non-participants as well as participants, and others chosen specifically for their knowledge of the policy, institutional or bio-physical influences on the project.
- *Group meetings, participatory workshops, PALI*: The AWF methodology developed a set of workshop activities called ‘*participatory assessment of livelihood issues and impacts*’ (PALI). This entails a range of PRA-type activities to explore livelihoods and project impacts (see Section 4.2). Participatory meetings are a good way to reach many people rapidly, gain a lot of information, and explore consensus and where it is lacking. They can be useful for highlighting and comparing different views, though differences on sensitive issues may not be revealed. However, the type of information that emerges is qualitative, can be highly affected by the context, and the sample is self-selecting. Group meetings were also held with non-participants, but in general the views of non-participants were often easier to elicit through briefer one-to-one discussions.
- *Household survey*: The need for a survey depends on what information already exists, what is required, and whether resources are available to undertake one properly (to do one badly is a waste of time). Surveys can be the only way to gain comparable data to allow for quantification, and to reach a representative sample. But they need a tight focus, good design, field-testing, and expertise in analysing results (Rennie and Singh, 1995). At Arabuko Sokoke, an existing 1997 survey of

Box 4 Preparing for fieldwork

Before the fieldwork, good planning must address:

- Team composition and roles
- Collaboration with partners/hosts
- Timetable
- Budget
- Objective setting
- Logistics
- The need to obtain and read existing reports

butterfly farmers and some non-participants provided useful quantitative information on group membership, activities and household earnings. At Il Ngwesi, no such information was available so a survey was conducted after the initial fieldwork to:

- (i) cross-check emerging findings with a wider and more representative sample (e.g. advantages and disadvantages of the lodge were given (based on PALI results), and the respondent asked to say whether they were of high or low significance); and
 - (ii) ask questions on issues not previously addressed – this was mainly quantitative data (employment, cash sources, harambee contributions) and issues best assessed person by person rather than in group discussions (involvement in decision-making, wildlife damage).
- *Financial records and ‘rummaging’*: Financial data must be gathered while in the field. It is unlikely that data on all financial flows will be available, so a fair degree of ‘rummaging’ is necessary (going through project records, enterprise records, receipt books, accounts and discussing incomes or uses of income with household members). Plenty of time must be allowed for tracking down financial records, rummaging through them, and processing data while in the field. It is also useful to visit shops or markets to collect local price information (e.g. price of staple foods). Exploration of what local people buy and sell, when and for how much, can add insights to the livelihood analysis.
 - *Recall, records and memories*: Sometimes earlier records are available for use as baseline data. If this is not the case, the present will have to be compared to the past through personal recall. Assessment of institutional change, in particular, requires going back to earlier years to search for indicators of how institutions used to operate. It is difficult to define in advance what to look for and this may require rummaging in old documents or open-ended conversations with people to identify changes and continuity over time.
 - *Observation*: Observing people going about their daily activities can be the best way to make sense of a mass of oral and written information on livelihoods, and can provide much that words do not describe.

Several different data collection methods need to be judiciously combined.

As Table 3 illustrates, each of these information sources can contribute to livelihood impact analysis. The approach should be structured according to what is practical and most likely to generate the right *combination* of findings. It would be wrong to think that livelihoods analysis is done only in participatory group meetings and that impacts on stakeholders are learned only from meetings with those stakeholders.

It is important to combine both qualitative and quantitative data (see Box 5) and also to avoid getting too immersed in local detail, at the expense of the bigger picture. For example, to gain a reliable perspective on the policy context within which a project operates, it is necessary to meet with diverse groups – outsiders (government officials, NGO staff...), local authorities (chiefs, headmen, representatives of the local administration...) – in addition to local residents. The livelihoods framework can then act as the key analytical tool to interpret and cross-check the data.

Table 3 Using different sources of information to address key livelihood themes

| Activity | Theme explored | | |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Information source | Livelihood strategies | Impact of project on livelihoods | Differences between stakeholders |
| <i>Secondary info.</i> | <ul style="list-style-type: none"> Particularly look at information produced in <i>other</i> sectors (e.g. agriculture, credit) | <ul style="list-style-type: none"> General information on other trends/causes of change – needed to ascribe causality to the enterprise. Possibly specific information related to the enterprise and its impacts. | <ul style="list-style-type: none"> Check whether reports are specific to a stakeholder group (e.g. men, cattle-owners, one area etc.) for comparison. Or if they include a stakeholder analysis. |
| <i>Project documents, enterprise records</i> | <ul style="list-style-type: none"> General background. | <ul style="list-style-type: none"> Use early project reports for baseline data, particularly on institutional/organisational behaviour. Draw comparisons between periods/groups and places if data is comparable. Follow up with authors if necessary to understand raw data or method. | <ul style="list-style-type: none"> Disaggregate records by stakeholder group |
| <i>Key informants</i> | <ul style="list-style-type: none"> General discussion of changes, problems etc. Explanation of detailed issues (e.g. labour allocation, marketing) Personal histories to give historical perspective. | <ul style="list-style-type: none"> E.g. with workers in the enterprise. Discuss use of income, time, trade-offs etc. E.g.: discuss changes in social organisation and capacity with representatives of institutions. | <ul style="list-style-type: none"> Conduct stakeholder analysis & wealth ranking with local representatives. Ask informants about differences between groups. Assess their replies in context of their own stakeholder group. |
| <i>PALI</i> | <ul style="list-style-type: none"> E.g. comparison and ranking of livelihood activities. Time-line and discussion of coping and adaptive strategies. | <ul style="list-style-type: none"> E.g. pros and cons of the wildlife enterprise – discussion and ranking. How income is spent. | <ul style="list-style-type: none"> Ask about differences between stakeholder groups. Divide into stakeholder groups and compare results. |
| <i>HH survey</i> | <ul style="list-style-type: none"> Mainly quantitative data: e.g. number of members in employment. | <ul style="list-style-type: none"> Difficult. Need focused but unbiased questions so identify key issues first. | <ul style="list-style-type: none"> Record key info to categorise respondents into SH group. Compare results between groups. |
| <i>Discussions with non-participants/out siders</i> | <ul style="list-style-type: none"> General discussion of livelihoods, resources, changes, problems etc. E.g. chief, teacher, hawkers, women at well | <ul style="list-style-type: none"> Impacts on them. Their opinions of impact on participants, or if unrelated, may provide useful comparison ('control group' principle). | <ul style="list-style-type: none"> Compare their interest and perspective with those of participants. |
| <i>Market visits, financial information</i> | <ul style="list-style-type: none"> Who is selling and buying what, for how much, why, when? | <ul style="list-style-type: none"> Opinions of traders (if enterprise affects supply or demand) | |
| <i>Observation</i> | <ul style="list-style-type: none"> Observe what people have and don't have, and who does what. | <ul style="list-style-type: none"> Look for physical evidence of enterprise activities and impacts as described (e.g. is equipment used?) | <ul style="list-style-type: none"> Observe differences in what people do or have, where, when and how. |

PALI = participatory assessment of livelihood issues and impacts; SH = stakeholder(s)

Box 5 Combining qualitative and quantitative methods: experience elsewhere

Multiple methods in SL-guided research in Mali

Brock (1999) assesses her experiences in using the SL framework for planning and implementing a research project in rural Mali and analysing the information generated. The objective and time span of fieldwork were quite different but, as with the approach taken here, Brock notes the need for a *variety of research combining methods* to capture the complexity and diversity of people's livelihoods.

The key elements of her approach to data collection and analysis were:

- Seeking historical data sets so that the dynamics of change in livelihoods can be established;
- Cross-checking historical data, agroecosystem survey data, population census data, and available statistics with current survey data. Collecting a core set of basic quantitative data covering well-being, income, expenditure and livelihoods at village level to ensure thematic comparability between the different villages studied;
- Use of semi-structured interviews, PRA visualisation and diagramming techniques (e.g. of causes and effects to establish which livelihood strategies are sustainable), and ranking (of wealth, well-being and sustainability), to assess the livelihood resources available to different actors in a community and to establish which local institutions operate to mediate access to these resources;
- Individual migration histories and income expenditure assessments to establish the range and combination of livelihood strategies pursued (and by whom).

It should be noted that this research project benefited from the presence of resident researchers in villages for lengthy periods (one year), as its purpose was research to understand livelihoods and their context. So not all elements of the approach are necessarily suited to the (normally) briefer process of impact evaluation.

Source: Brock (1999)

Failure to integrate data

An NRI/University of Reading paper in 1998 argued that 'the trustworthiness of information will be greater if quantitative and qualitative approaches to data collection and analysis are combined rather than being used separately' (cited in Brock 1999). However, failure to integrate is a common weakness. For example, an Action Aid study to assist staff in several countries to develop participatory indicators of impact found that qualitative and quantitative data were rarely integrated (Goyder et al., 1998).

4.2 The PALI tool

The Participatory Assessment of Livelihood Issues and Impacts (PALI) (designed by the AWF team) formed a cornerstone of the overall approach to livelihood impact assessment in the AWF case studies and for this reason is discussed in greater detail.

PALI essentially consists of group meetings in which participatory appraisal techniques are used to explore livelihood issues and, within these, people's assessment of the pros and cons of a project. This is not a radical participatory development tool, because it is used more to extract information for outsiders than to empower. But the participatory element is essential because it aims to place people, their perceptions and their complex, diverse livelihoods at the centre of analysis.

Table 4 runs through many of the possible topics to discuss ranging from a general description of livelihoods to specific issues relating to the project. It illustrates different PRA-type tools that can be used for each, and what can be learned from them. The exact mix cannot be prescribed in advance. As with any use of PRA tools, the value does not lie in completing a matrix or time line, but lies in the

analysis of what is said or drawn or ranked, exploring reasons why, differences in perception, and implications.

Table 4 Topics and PRA-type tools for livelihood impact assessment within PALI

| Topics | Activities | What can be learned |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Current livelihood activities | List pros and cons | Livelihood strategies. Criteria for judging |
| | Rank according to: - Contribution to income - Preference - Importance to HH. Discuss. | Key activities and assets. Ball park figures for income from different activities. Values other than cash income. Criteria can then be discussed/expanded/ranked |
| | Generate <i>criteria</i> for scoring activities and construct matrix | As above but more complex. Focuses on locally-generated criteria (which can then be ranked). Scoring against criteria is easier to visualise for consensus-building and comparing across SH groups. |
| | Incorporate the wildlife enterprise in the above | How wildlife enterprise fits into strategies, how it meets livelihood criteria. |
| | Construct matrix of activities and needs | What needs are, which activities are pursued and why. Which activities have multiple functions. |
| | Construct matrix of positive and negative impacts of WE on other activities | Impacts of project on other livelihood activities |
| | Carry out any of the above in stakeholder groups | Differences between SHs in terms of activities, strategies, and impacts. |
| Seasonality | Construct matrix or discussion of seasonality of income, work, food availability. | Livelihood strategies. Main needs. Human capital availability. |
| Wealth ranking | Carry out wealth ranking of participants and explanation of criteria | Stakeholder identification Local criteria for livelihood security |
| | Compare with previous wealth ranking | How people move in and out of poverty and why |
| Scenario-building (positive and negative) | Paint picture (verbally or literally) of positive and negative future – in general or resulting from this enterprise | Long-term trends. Long-term impacts of project Useful if going on to joint planning. |
| Current assets and resources | Discuss: what are the assets and resources you currently rely on to support the family (building blocks)? How? | Should identify livelihood assets, and relative importance. |
| Constraints | Discuss: what are the constraints that prevent livelihood improvement? | Encourages focus on external influences |
| Pros and cons of WE | Lists pros and cons | Direct and indirect impacts of project |
| | Rank pros and cons | Priority concerns, significance of impacts |
| | Identify who bears costs and receives benefits | Distribution of impacts between stakeholders |
| Participation in the project | Discuss who does and does not participate, why? | Stakeholder roles. Impacts as perceived by each. |
| | Discuss how participants are selected? | Barriers to participation (external or internal) |
| Expenditure of earnings | Rank/matrix of items of expenditure Who decides? | Impact of earnings (e.g. on needs, HH assets) Who benefits |
| Time-line and trends | Construct time line. Discussion of key events and gradual trends. How people coped or adapted? How are they preparing for the next change? Household action, community action. | Adaptive livelihood strategies and coping strategies. Influence of external policies and organisations. Dynamic processes. Role of internal organisation. |
| Changes and causes | Construct matrix of recent major changes and their causes, then rank the most influential causes of each | Changes in livelihoods over time. Role of external influences. Significance or not of the project as a major influence. |

SH = stakeholder(s) HH = household(s)

Discussions often start at a general level, to reveal broad livelihood strategies, and then move to project-specific concerns, helping to reveal the fit between the project and existing livelihoods. To ensure an adequate understanding of the criteria by which people judge different activities, initial discussions should go well beyond the project-related activity.

An example from Arabuko Sokoke illustrates the process. Participants were asked to list the main household activities, and in small-groups they listed the advantages and disadvantages of each. Butterfly farming was just a minor element of this wide-ranging discussion. Synthesis of these results generated a list of key issues or criteria for selecting livelihood activities (shown in the first column of Table 5). The research team could then identify which of these were applicable to butterfly farming, and whether in a positive or a negative way. Similar results might have been achieved through conventional matrix ranking of activities and criteria, but a first attempt to do this did not work well. In the second approach the generation of criteria was less forced, though relied more on interpretation by outsiders. This information was combined with other data gathered when participants were asked to list the advantages and disadvantages of butterfly farming and then rank and discuss the results. In addition, different sources of income were ranked by different stakeholder groups according to their scale in recent years. This revealed that butterfly income was generally in the top three sources of income for most farmers, but the largest source of income only for the large-scale farmers.

Table 5 Desired characteristics of income sources, Arabuko Sokoke¹

| | Positive examples² | Negative examples |
|-------------------------------------------------------|---------------------------------------------|-------------------------------------|
| Income is sure, low risk | Casual work | Agriculture Butterflies |
| Income is immediate | Casual work | Cassava Butterflies |
| Requires little time/effort | Butterflies ³ | Casual work |
| Work can be done at home | Butterflies | Business from a kiosk Employment |
| Work can be shared among household members | Butterflies Agriculture | Employment |
| Marketing can be done at any time. Product stores. | Dried fish | Butterflies |
| Possible throughout the year | Tobacco/snuff ⁴ (Butterflies) | Crops (Butterflies) |
| Market is predictable and stable | Tobacco/snuff | Butterflies |
| Low barriers to entry | (Butterflies) | Business (Butterflies) |
| Not dependent on others | Coconut selling | Butterflies |

1 Source: assessment of pros and cons of different income-sources at PALI meetings. The criteria and table were derived by the evaluation team based on the discussion.

2 The positive examples are income-sources that have the desired characteristic. The negative examples are income-sources for which the *opposite* characteristic was mentioned as a disadvantage.

3 Butterfly farming has been added to each row, to indicate whether it shares the positive characteristic or the negative one.

4 This was translated as 'tobacco' during discussions, but as there is little tobacco in the area, project staff later suggested it meant snuff.

This example of comparing different activities highlights a principle that should run through virtually all of the PALI activities: use discussion of constraints/hopes/trends/activities...to explore people's own livelihood priorities and then explore how project activities relate to these.

4.3 Methodological adaptation

The choice of methods to use depends on the local situation: what is logistically and culturally feasible, how much information is already available, how stakeholder groups are divided and can be addressed during fieldwork, etc. The Il Ngwesi and Arabuko Sokoke case studies provide examples of how the overall approach was adapted to fit different contexts. At Il Ngwesi, the logistical constraints of travel in the area combined with the importance of examining differences defined by geographical area, meant that five PALI meetings were held in different neighbourhoods. At Arabuko Sokoke, the days were divided differently, with two large meetings drawing butterfly farmers from three villages at each, and two other days devoted to meeting non-participants in the same area. At Il Ngwesi a return visit was made to draw on the wealth of financial information at the neighbouring private ranch (that maintains the accounts for the group ranch lodge), while at Arabuko Sokoke financial analysis and 'rummaging' was focused in the project office. Appendix 1 provides a summary description of the fieldwork at both case study sites.

Use discussion of constraints/ hope/ trends/ activities to explore people's own livelihood priorities and then explore how project activities relate to these.

Broadly similar approaches were used in the PALI at both sites, but adapted to fit with the different skills of participants and stakeholder divisions. At Il Ngwesi, livelihood activities were compared by filling in an activity/needs matrix (activities were ranked according to whether they fulfilled particular needs). The PALI tools at Arabuko Sokoke have been discussed above. At Il Ngwesi there was more discussion of stakeholder issues *within* the meeting (wealth ranking and discussion of the distribution of costs and benefits). At Arabuko Sokoke, there was less direct discussion of differences, but participants at the meeting were sub-divided into stakeholder groups (according to gender and scale of production) for comparison of perspectives.

Box 6 Lessons learned in an ActionAid project on participatory impact assessment

A synthesis of Action Aid experience with participatory indicator setting revealed the following challenges.

Information-gathering and fieldwork

- excessive dominance of PRA
- lack of learning from other organisations
- inadequate use of pre-existing data sets
- different sources of data were not integrated well — facilitators preferred to see methods as bound and separate packages.
- gender issues were assessed separately, e.g. issues relevant to women were assessed, but women and men's views on common issues were not incorporated;
- participatory identification of indicators was found by some to be too time-consuming
- indicators chosen varied between people, places and over time, i.e. they changed their minds!
- questionnaires were of limited use due to poor design, and lack of experience in interviewing and analysis.
- villagers collected data but the opportunity to learn from their analysis of it was missed;

Analysis and interpretation

- lack of guidance on analysis of qualitative information
- analysis was poorly documented
- aggregation of results led to loss of differentiation (e.g. by gender)
- a reluctance to reject and prioritise during analysis.

Source: Davies and Williamson (1997) Goyder et al. (1998).

Table 6 What worked and did not at Il Ngwesi and Arabuko Sokoke

| <i>Good things, things that worked well</i> | <i>Problems, things that did not work well</i> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Il Ngwesi</i> | |
| <p>PALI</p> <ul style="list-style-type: none"> Facilitated discussion made it possible to cover many topics; Held separate women's meeting (because women did not attend main meetings); Managed to avoid time-consuming Maasai monologues through effective (local Maasai) chair; Repetition of PALI at different sites led to improvement; Facilitators/translators understood the overall aim so could guide the meeting with little intervention; Good introduction by local leaders encouraged people to speak out; Facilitators were involved in the evening reviews because all based away from home. <p>GENERAL</p> <ul style="list-style-type: none"> Audited accounts for 1997/8 came out in time to be used in the commercial analysis; Good records of lodge wages and visitor numbers for some periods were available at Lewa Downs. | <p>PALI</p> <ul style="list-style-type: none"> Some people did not participate well at meetings; Women did not come to meetings; Difficult terrain and transport meant it required much more planning and allowed less flexibility; Difficulties in ranking activities; Discussion may have been influenced by presence of members of the Board of Directors and Group Ranch Management Committee and particularly presence of the Chief. <p>GENERAL</p> <ul style="list-style-type: none"> Discussions with some stakeholder groups (women, cultural boma employees) were left late or prevented by circumstance; No time before the PALI fieldwork for team training; Not enough time after the fieldwork to review and write-up field notes. Analysis was left too late. Fieldwork was squeezed due to cutting time in the field. |
| <i>Arabuko Sokoke</i> | |
| <p>PALI</p> <ul style="list-style-type: none"> Break-away conversations with 1–2 individuals for detailed information, simultaneously with group discussion; Despite presence of Group Representatives, problem of GRs came out; Dividing participants into small, medium and large-producer groups (self-definition) to discuss income and perceptions; Analysis of current activities gave many insights into local criteria; <p>GENERAL</p> <ul style="list-style-type: none"> Initial consultation with stakeholders; Flexibility – adapted daily to the situation; 1997 survey provided background information that would have been very time-consuming to gather; Meetings with non-participants – good to get their views; Meeting private sector operator – useful perspective; Getting financial data and doing Excel analysis while still at the enterprise, discussing results/gaps on the spot; Cooperation from Kipepeo team – open not secretive; Feedback meeting to share initial findings. | <p>PALI</p> <ul style="list-style-type: none"> Could not draw up criteria for ranking activities; Some working groups too big, dominated by one/few; Group Representatives influenced discussion; Group Representatives and others encouraged exaggeration of butterfly earnings; Did not do wealth ranking of group members to identify wealth status of Group Representatives and big producers. <p>GENERAL</p> <ul style="list-style-type: none"> Too rushed; A lot of pressure on junior staff to join the fieldwork and continue their own work; Needed more exploration of livelihood changes for the minority of big-producers; Bias created as all meetings were set-up by and run with Kipepeo staff. |

Source: Ashley (1999)

GR = Group Representative

Box 6 describes more general difficulties in developing participatory approaches to impact assessment, that were identified in an ActionAid project. These lessons were found instructive for this methodology. Table 6 summarises the positive and negative aspects of different tools in the two case studies and some similar problems emerged. In particular, the difficulty of incorporating PRA data with other sources of information, and the weaknesses in analysis of data.

5. Analysis, results and dissemination

5.1 Analysis of data

The value of an impact assessment depends on how well information is analysed. While ‘lack of data’ is a common complaint of evaluators, weakness in *analysis* is usually a much more fundamental problem (Casley and Lury, 1981; Booth et al., 1998).

The analysis of data gathered using the livelihood assessment methodology is a complex and lengthy process involving quantitative analysis, interpretation, cross-checking and synthesis. In order for this process to result in an effective representation of livelihoods, the analysts must pay close attention to detail, while taking care not to overlook wider, macro-level issues and the policy context.

The analysis of data gathered using the livelihood assessment methodology is a complex and lengthy process.

Analysis should aim to synthesise and structure all the information generated into a form that indicates the overall direction (positive or negative) and significance of livelihood changes, and the key explanatory factors. Though analysis is an iterative process, that should be fed by and feed into the work from the start, it can be useful to think of 5 stages.

(i) *Synthesise and structure the field data.* Building tables to summarise across issues, groups or time periods can be a useful way to structure information. It will also quickly reveal gaps or inconsistencies. In particular, the reported advantages and disadvantages of the project from different sources will need to be compared, and probably put into a summary table. Differences between stakeholder groups can be noted within the table or by constructing several tables. Any ranking of the pros and cons should be summarised, using scoring if appropriate. Again, results from different groups should be compared either to produce an average (if they are similar) or to highlight differences.

Such data analysis can be painstaking and time-consuming but is essential to bring structure to a mass of information, and to build the bigger picture. However, there is a considerable risk of losing different perspectives in the process. Therefore it is essential to highlight differences between sources of data and opinions, rather than try to push findings into one consensus view. For example, in synthesising the pros and cons of butterfly farming at Arabuko Sokoke, many issues were common to a majority of farmers, but a sub-set of issues was relevant only to Group Representatives. These are presented separately in the summary table below (Table 8).

(ii) *Interpret the field results* to address the livelihood questions (see Section 3.2). This is where the SL framework adds value to the analysis. For example, pros and cons can be converted into an analysis of impacts on assets, activities and outcomes. Tables 7 and 8 show how this conversion was done for Arabuko Sokoke. Data from PALI and the survey at Arabuko Sokoke was first summarised, as in Table 7.

Table 7 Advantages and disadvantages of butterfly farming

| Advantages | Disadvantages |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Takes little time | Risky: <ul style="list-style-type: none"> • losses due to disease and pests • rejects (pupae not sold) |
| Can be done at home | Unpredictable: Availability of caterpillars, survival rates, and size of market vary, and are not understood |
| Work can be shared among family members, including children | Payments delayed: gap between investing time and earning income |
| Short harvest time compared to crops | Marketing has to be done immediately (within 2 days) |
| Low investment in equipment | Dependent on group representative for supply of caterpillars and sale of pupae |
| Group funds used for loans | Generates conflicts within groups, and between groups and non-participants |
| Increases access to KWS, and other institutions/sources of funding | Concentrates power in a few hands (group representatives) |
| Recognition from outsiders | |

Source: PALI meetings at Arabuko Sokoke

This data, combined with other information gathered during the fieldwork, was then interpreted according to the SL framework. Table 8 summarises the findings concerning impacts on livelihood components and differences between stakeholders.

Table 8 Impact of butterfly farming on livelihood components of farmers and Group Representatives

| Impact on: | For most participants | | Effects specific to Group Reps and/or big producers | |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------|
| | Positive effects | Negative effects (or limitations) | Positive effects | Negative effects |
| ASSETS | | | | |
| <i>Human Capital</i> | Income used for school fees | | | |
| <i>Physical Assets</i> | Income used to buy food stocks | | | |
| <i>Financial Assets</i> | Increases chance of being able to borrow via group funds | (Income is insufficient to eliminate the need for loans) | Income used to repay debts, build savings | |
| <i>Natural Capital</i> | Contributes to protection of forest? Encourages/enables households to leave some family members in the area, rather than migrate | | Gain access to forest for collecting butterflies/eggs | |
| <i>Social capital</i> | Development of new groups of producers. Income used for bride price, enabling marriage. | Conflicts within community. Power lies with a few, others are dependent | Gain power within community and access to external agencies | Group Representatives are not valued.' |

| ACTIVITIES & STRATEGIES | | | | |
|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <i>Farming, schooling & other activities</i> | Little impact due to low time input. Work can be shared within household, further reducing trade-off with other work | | | Reduction in other activities, (e.g. business) i.e.: opportunity cost of time spent on BF |
| <i>Strategies for selecting activities:</i> - Diversify - Minimise risk - Maintain liquidity | Contributes to diversification Additional income | High risk. Unpredictable return. Earnings delayed | Less risky: total income variable but minimum income fairly secure | |
| WELLBEING | | | | |
| <i>Cash</i> | Earnings useful Can be significant | Limited and unpredictable | Earnings significant | |
| <i>Food security Health</i> | Earnings spent on food and health | | | |
| <i>Sustainability of resources</i> | Butterfly farming is sustainable. Contribution to sustainability of forest? | | | |
| <i>Empowerment</i> | Increased communication with external bodies | Disempowered by Group Representatives Lack of capacity building of groups | Gain power and status | Some earn distrust |
| <i>Reduced vulnerability</i> | | Cannot rely on unpredictable earnings | More secure income boost | |
| EXTERNAL POLICIES AND INSTITUTIONS | | | | |
| <i>Market access</i> | Gain access to international butterfly market | Market access depends on NGO and Group Representatives | Control access of members to project market | |
| <i>Attitude of outsiders to forest conservation</i> | See that forest is producing financial returns | | | |
| <i>Attitude of outsiders to the communities</i> | Gain status from national and international recognition | | | |
| <i>Access to external decision-makers</i> | Improved communication with KWS, Forest Dept, and donors | | Greatest access to project and other staff (e.g.: via meetings, workshops) | |
| CONTEXT | | | | |
| | No change. Seasonality, climatic vulnerability, market-variability, land-pressure continue, and also influence BF. | | | |

BF = butterfly farming

One common mistake is to try to interpret findings without doing the necessary data analysis, i.e. to identify implications from impressions from fieldwork and scraps of data. The other common mistake is to do the data analysis, but leave it at that, with no interpretation. If the data is not robust and interpretation tenuous, it is better to acknowledge that than to simply present findings as data with no interpretation, or as statements of apparent fact with no caveats.

(iii) *Draw conclusions about impact* The livelihood questions provide structure, but still generate a diverse array of issues to consider. Answers need to be synthesised further to draw conclusions about the direction, scale and significance of impacts on different groups. This synthesis requires an understanding of the priority livelihood issues in the area. There is no simple formula for doing this, but key questions include:

- Are impacts overall positive or negative?
- For whom?
- What are the most important impacts?
- According to whom?
- How significant are they? In what way?
- Do changes *alter* livelihood strategies and security, or do they just add one element (a coping strategy) within existing approaches? Can impacts be summarised in terms of changes in livelihood security or robustness?⁸

Interpretation of the significance of cash earnings to local livelihoods is described in Box 8 below. Interpreting the significance of other changes, such as in access to assets, can be more difficult and tentative, probably drawing on some projections about long-term changes and trends. In prioritising impacts it is important to build on participants' own ranking of priorities and explanation of them.

Adaptive strategies represent a permanent change in livelihoods, whereas coping strategies represent a temporary change to cope with shocks or seasonality (Rennie and Singh, 1995).

(iv) *Identify key factors influencing livelihood impact.* Assessing and describing the main livelihood impacts is still not enough. The next question is *why* are these the impacts? What are the key factors shaping them? What is it about the project, policy or institutional context, or the livelihood situation that shapes the impacts? This step is essential for identifying what can be done to enhance the scale or change the distribution of project impact.

(v) *Summarise overall findings and conclusions.* Integrate the results of the livelihood assessment with other components of the analysis. Draw conclusions (in the AWF cases, concerning both development and conservation impact) and identify recommendations. Drawing conclusions requires an understanding of the context, and not just the details of the enterprise. Making recommendations depends on understanding *why* the impacts happen, which key influencing factors could be changed, and who are the different target audiences for recommendations.

5.2 Quantification of results

To what extent can livelihood impacts be quantified, and to what extent do they need to be? Community members generally do not need all the pros and cons of an intervention to be reduced to numerical or monetary values because they can make decisions by prioritising (identifying relative not absolute value). However, for reporting livelihood impacts to outsiders, making comparisons with other interventions, and identifying implications for policy-makers, further quantification is needed (though not if this is so arbitrary and artificial that results provoke more questions than answers).

⁸ Livelihood security can be defined as ability to make a living and withstand shocks; robustness can be defined as: rising out of poverty, ability to influence policies and institutions, ability to influence access to assets (Carney, 1998).

Box 7 The importance of estimating – and interpreting – local financial flows

At Il Ngwesi and Arabuko Sokoke, and in other livelihood impact assessments in Namibia⁹, it proved important to integrate detailed analysis of local financial flows into the livelihoods analysis. To make best use of the data, two issues were critical:

- Separate analysis was needed of the scale and distribution of *different types* of cash income
- For each type, *the significance to livelihoods* needs to be interpreted

Local financial impact includes all types of cash injection to the local economy. Firstly, different types of income need to be distinguished and estimated, such as:

- (i) Regular wages earned by permanent employees
- (ii) Casual earnings from sales of products, informal sector activity and casual labour
- (iii) Collective community income earned from lease fees (which may be distributed as a household dividend)
- (iv) Profits accruing to enterprise owners (private or the community)

Earnings in each category should be calculated *separately* because they are earned by different people and are likely to have quite different livelihood significance. For each category of financial income, estimates are needed of:

- Who is earning: number of people, percent of relevant population, type of person
- How much: typical amount per person (noting minimum and maximum or seasonality if there is wide variation)

Secondly, the significance of each type of earning to the earned needs to be assessed, in terms of what it can buy, how they report spending it, or how it affects total level and variability of household income.

For example, at Il Ngwesi, approximately 25 men are employed at the lodge, earning a substantial income that clearly impacts livelihood status (e.g. on an average of 4,000 Ksh per month, they are able to buy land, get married, or cover most food expenses for a whole household). Another 25 men and women are earning smaller, variable, but fairly reliable incomes from an associated enterprise which is a cultural boma. These earnings enhance livelihood security because of their reliability, but with less dramatic impact on how people live. A large but unknown number of people have increased their casual labour earnings – during construction this amounted to a massive 1.8 million Kenyan shillings. Finally, the Group Ranch as a whole is earning collective income from lodge profits and other fees. This income, about 1 million Ksh per year, is very substantial compared to any other source of revenue available to the Group Ranch Management Committee and is facilitating investment in schools and bursaries, though if divided between all households it amounts to about 2,000 Ksh – approximately the price of large male goat.

At Arabuko Sokoke, the categories were different, but the need to avoid one ‘average income’ figure for assessing livelihood significance was the same. A dozen or so large producers are earning substantial and fairly regular incomes which can amount to almost as much as a primary school teacher’s salary. For the majority of producers, income is highly seasonal, regarded as a ‘useful bonus’ which gives a substantial short term boost to spending on food and education, but not a long-term shift in security. For the many occasional producers, it is simply a way to earn a few shillings.

⁹ See Ashley (2000) ‘Applying Livelihood Approaches to Natural Resource Management Initiatives: Experiences in Namibia and Kenya’, ODI Working Paper 134.

In both case studies it proved very important to spend considerable effort to estimate different kinds of financial flows, so that their significance to livelihoods could be assessed (see Box 7). Some non-marketed physical costs/benefits can be valued by applying the prices of market equivalents, near-substitutes or replacements (e.g. value of forest products, opportunity cost of time, possibly even the savings function of livestock). However, the dependence of the results on assumptions about what is an equivalent and which market price to use will need to be highlighted. Quantified costs and benefits can be used for financial cost-benefit analysis, by adding the estimated values to the estimates of financial flows.

It proved very important to spend considerable effort to estimate different kinds of financial flows, so that their significance to livelihoods could be assessed.

Although this will be an incomplete reflection of livelihood impact, it can be a useful component, and can also help highlight some of the differences between stakeholder groups.

It is, though, important to ensure that money-metric approaches, based on outsiders' assumptions, do not mask relative *values to households* of different impacts. Incorporating these values into the analysis poses a greater challenge. Some intangible benefits and costs are very difficult to quantify. They quickly become unrealistic and meaningless if efforts are made to do so. For example, it is almost impossible to allocate a meaningful value to human fear and insecurity due to elephants, or pride at participating in new community institutions. But if the elephant threat is ranked by participants as the most important concern (as occurred during participatory livelihood analysis in Namibia) this is instructive.

Qualitative indicators, such as farmers' ranking and prioritisation of benefits/costs, can be compared with quantitative data on tangible inputs. This can give an idea of at least the *minimum* cash value of the intangibles. Some impacts are better quantified in terms of equivalent *actions*, not monetary values. For example, the additional income gained might alleviate the need to sell off one cow in times of drought, or the extra time needed for a new activity may be approximately as much as is typically invested in a cropping season by one person. This can reveal more about livelihood significance than dollar calculations.

5.3 Results and dissemination

Findings of different types were useful at different levels and for different people: some for the specific project reviewed, some for the AWF overview of wildlife enterprises, and some more generally for those interested in applying the SL approach to impact assessment (the latter are covered in Section 6 rather than here).

At the *project level*, the livelihood assessment provided

- An overview of the livelihood impacts of the project;
- Indication of how livelihood strategies affected people's participation in the project;
- Recommendations to enhance impact and participation;
- An indication of complementarity and/or tensions between the livelihood/development objectives of the project, the conservation objectives, and the commercial goals.

The findings at Arabuko Sokoke are summarised in Box 8.

Box 8 Conclusions on livelihood impacts of Arabuko Sokoke butterfly farming project

Livelihood impacts and contribution to development

The main impacts of the project are on the 100 or so active butterfly farmers. Butterfly farming is an adaptive strategy for a few people (less than 10) who have given up other work (such as selling buns) to be large producers and Group Representatives. For the majority, it is a minor coping strategy, an additional source of income to supplement other activities and spread risk. It does not substantially alter their livelihood situation. Nevertheless, it has strengths as a development strategy.

- It helps households diversify their income sources; this is important as sources of income in the areas are generally unreliable;
- It represents a fairly significant source of income for many participants;
- Despite the unreliability of butterfly earnings, butterfly farming fits well with livelihood strategies by providing work that can be done at home, with little reallocation of resources (human, financial or natural).

These advantages are particularly important to women and poor families. The earnings enable families to spend more on food, school fees and health than they otherwise would. A combination of measures could reduce risk for farmers, through technical support and pricing changes, particularly to reduce reject rates.

Although most of the positive impacts have limitations there are few *negative* impacts. This is a strength, given that many projects and new economic activities bring costs as well as benefits. The main negative impact for participants relates to the role of Group Representatives, which creates conflict, dependence and exacerbates unreliability of earnings. It is very difficult to assess the significance of these costs. Measures to reduce the power of Group Representatives would involve substantial restructuring of enterprise functions and need prior feasibility assessment. For non-participants, the problem is lack of involvement rather than imposition of costs – except for the squatters for whom the butterfly enterprise could be seen as a further obstacle to their land claims to the forest area.

The development impact of the project suffers from two fundamental limitations:

- The total number of beneficiaries is small in the context of poverty in the area
- Benefits are disproportionately gained by a few

Ways of enhancing livelihood impact include:

- Decrease risk and unreliability of earnings through: technical measures to reduce losses, more information flow about species demand, and improved distribution of payments.
- Restructuring enterprise functions to liberalise them and reduce power of Group Representatives
- Enhance access to loans through butterfly farming groups
- Review registration process to identify and involve actual participants not names of household heads, so making direct contact with women farmers
- Spread opportunities to others with interest and access to food plants.

'Fit' between development, conservation and commercial goals

The fact that the project contributes to livelihoods of butterfly farmers is creating a positive conservation impact. But this is mainly by influencing *attitudes* to degazetement in the area, through a practical and well-known demonstration of local people deriving benefits from forest use. This attitude change is more important than any behavioural change of the 100 or so butterfly farmers in forest-product use due to a change in their own cost-benefit of forest degradation i.e. the conservation impact is therefore not necessarily proportionate to the number of people benefiting or scale of benefits but more related to wider issues of perceptions within the political arena.

The development and conservation objectives of the project generate additional costs compared to a purely commercial butterfly farming enterprise. For example, working with over 100 scattered producers, instead of a well-trained few, and using project management time to participate in conservation discussions, increase costs but not revenues. Though there may also be some commercial inefficiencies to reduce, these development and conservation goals are the main reason the project is working just below rather than just above break-even. This indicates that donor subsidy to cover these additional costs may be both needed and justified.

Comparing the findings from the case studies within the wider context of wildlife enterprises more generally, as in the AWF WELD project, four key conclusions emerged about the livelihood impacts of such projects:

- *How a profit 'fits' with other activities and livelihood strategies can be as important as direct outputs or costs.* For example, returns to butterfly farming are generally low, but it is a useful activity because it does not conflict (in terms of time, location, or resources used) with other livelihood activities, including home-based responsibilities.
- *Impacts on assets is also critical.* For example, at Il Ngwesi, the project's impact on natural, physical and human capital was found to be more important to most Group Ranch members than the 50 or so new jobs that had been created. The wildlife/wilderness area around the lodge supports local people's strategy to hold this area in reserve for emergency drought grazing. The lodge's physical presence, radio, and vehicle help deter neighbouring tribal groups from using the land. The radio and vehicle also provide emergency access to hospital, which was previously lacking. The collective income earned is funding pre-schools within the Group Ranch.
- *Earnings are concentrated among a few; non-cash impacts are more widely spread.* For example, at Il Ngwesi, the Lodge has changed the livelihood status of the waged employees. For others, it has not changed their livelihood status, but boosts livelihood security and sustainability through the improvements in collective assets (grazing, security, infrastructure, education and possibly in the long-term management capacity).
- *Some livelihood impacts can be enhanced through changes in project implementation.* It is important to be creative and opportunistic in maximising the range of benefits to different groups, rather than focused on a single impact (e.g. jobs). Allowing emergency access to the enterprise assets (vehicle, radio), encouraging casual labour opportunities (using men not machines), fostering spin-off businesses, or adapting the timing or location of flexible activities or payments, can all enhance benefits or reduce livelihood trade-offs.

These findings were incorporated into the overall WELD analysis, the preliminary results of which are shown in Box 9.

Box 9 Preliminary conclusions and implications of the WELD overview of wildlife enterprises

1. **Livelihood impact is key to understanding the real development impact of wildlife enterprises.** The indirect and non-cash benefits are at least as significant as cash flows in terms of impact on most beneficiaries.
2. **Creativity and opportunism are needed to ensure leveraging of enterprise impact through the creation of varied and different types of benefits to reach more people.**
3. **Equity rather than equality is key to effective distribution of benefits.** While we cannot and should not aim for an equal distribution of benefits between stakeholders, we can aim for equitable access to opportunities and ability to influence decisions, and equitable returns to effort.
4. **The commercial performance of wildlife enterprises must be strong enough to ensure sustainability.** There is often a trade-off between profit-motivation and other goals of local development and conservation efforts. However, many enterprises could be performing better commercially while achieving their complex goals.
5. **The enterprise conservation logic must be clear and monitorable.** Links between project impacts, conservation threats/priorities, and intended changes should be explicit.
6. **There is a clear role for governments and donors to play** in stimulating beneficial enterprise 'externalities' from enterprises (positive development and conservation impact). This should be done in a way that minimizes the trade-off with commercial viability. Options include supporting service delivery systems and encouraging policy and legislative reform.

The results of the case studies were also useful to AWF for assessing tensions and complementarities between the development, conservation and commercial objectives of wildlife enterprises, because the livelihood analysis helps to clarify what is needed to maximise development impact. The application of the methodology served another purpose at a more general level: it demonstrated a different way of thinking about project impacts, and the usefulness of focusing on livelihoods. This is not only relevant to impact assessment, but other aspects of project management.

The methodology demonstrated a different way of thinking about project impacts, and the usefulness of focusing on livelihoods.

5.4.1 Dissemination of findings

If the findings of the impact assessment are to be useful, dissemination matters enormously. It requires identification of target audiences and the content and type of format that is most appropriate to each. The production of several tailored outputs presents a particular challenge and can be very time-consuming.

One clear target audience for the case study findings was project staff. This involved 2-way communication not a one-off event. The process of feedback from the review team began with a report-back on the last day of the fieldwork. Project staff were then given drafts to comment on, which both improved the analysis and reduced their waiting time for written results.

To disseminate findings to the wider development and conservation community written reports are the main output. Given the complexity and multiple layers of analysis involved it was particularly important to try to make the reports user friendly. The reader needs clear signposts to the structure and the conclusions. The 8 key questions used in this methodology provided the structure of the report, many details were summarised in boxes tables and appendices, links shown in figures or diagrams and substantial time was invested in editing. Nevertheless, the resulting reports of 40–50 pages are more suitable for those with a strong interest in the specific project than in broad conclusions. Therefore several other dissemination formats are being used or considered. In particular, a short 6-page ‘overview’ of findings from the case studies is to be included with the printed case studies and used in other formats and forum. The range of dissemination outputs currently underway includes:

- Full reports on each case study, available on the web;
- An overview of lessons emerging on Wildlife Enterprises, available on the web;
- Publication of country volumes (Kenya, Tanzania, Uganda) containing the overview, a country-specific introduction and the relevant case studies;
- A ‘handbook’ describing the methodology – in paper and on the web – also described through this Working Paper, and possibly in a summary form, and;
- Integration of findings into the many other outlets in which the AWF and ODI are involved (e.g. other reports and publications, workshops, evaluations etc.).

PART C: REFLECTION AND IMPLICATIONS

6. Lessons learnt

The case studies discussed in this paper generated a number of lessons for assessing the livelihoods impact of development interventions. They also yield a number of reflections on how the methodology could be further applied in practice.

6.1 Application of the approach

6.1.1 *Need for a combination of field methods*

The livelihoods approach requires the use of various methods – both qualitative and quantitative – and considerable triangulation of data. This generally requires adaptation of existing tools rather than the invention of new ones. Stakeholder analysis is a critical starting point to enable an understanding of the diverse actors affected by a project. PRA methods are essential in order to find out people's own priorities and perceptions of livelihoods, livelihood constraints and possible solutions and to give participants a greater voice and role in the studies. Since each activity or source of information can shed light on several issues, it is important to keep the 3 core themes (current situation, nature of change, and key stakeholders) in mind. This helps maximise the value of data collection and analysis.

The main conclusions drawn from the case studies about the use of different methods were:

- In the field the most important point is to know what you aim to capture, then use ingenuity to do so;
- Flexibility, time and strong fieldwork skills are needed;
- Getting information is only half the story – analysis is as important and as time-consuming.

6.1.2 *Skills and resources*

An SL impact assessment *can* be done on NGO resources, and does not necessarily require massive donor-funded studies or long-term research. On the other hand, the methodology stretches NGO resources and capacity. It requires inter-disciplinary collaboration, strong analytical skills, good local facilitation and, in the two case studies described here, expatriate input. Data analysis was a particular challenge. Such skills are often weak in evaluation teams and they may be difficult to strengthen. Though this can be done through a judicious mix of training in key evaluation methodologies (PRA; interviewing techniques; recording and structuring the data etc.) as well as continual learning by doing, it is difficult to combine this with additional training in the SL approaches.

Within the AWF, the methodology continues to be used by the WELD team, and parts of it adopted and adapted for other purposes. But it is proving difficult for NGO staff to replicate in its entirety, given the time and resources required.

6.1.3 *Sharing the approach with others*

The overall approach of focusing on livelihoods has been generally welcomed. The SL framework and livelihoods impact assessment methodology has been shown to provide a powerful tool to establish the wide-ranging impacts of different types of projects. There is therefore considerable rationale for sharing it with others. However, this is not necessarily easy.

First, for people to be able to adopt and adapt the methodology they need to have *prior* skills in and exposure to PRA, stakeholder analysis, and social science analysis. The focus should be on helping people to *adapt* existing skills to an SL focus, not develop new ones. Second, while it may help, a methodology handbook is not on its own sufficient to share ideas. As with PRA, there is a need to learn by doing and through practice in multidisciplinary research teams. Third, it is important not to give the impression of pushing the SL approach as a mission; this is likely to stimulate resistance. It must be emphasised that the ideas are promoted as an effective and flexible tool for understanding complex realities. Furthermore, any tool can be used badly, and to use the approaches outlined here effectively, an understanding of and sympathy with the key principles – not the jargon – is essential.

A further question relates to the validity of measuring impact against objectives (SL considerations) that were not explicitly defined at the beginning of the project. As the sustainable livelihoods framework is a relatively recent development, few projects that are currently in the process of evaluation have explicit livelihoods goals.

6.2 Strengths of an approach focusing on sustainable livelihoods

‘Livelihoods approaches’ were used and proved useful at two different levels:

- At a fundamental level: putting livelihoods as the focus, and enhancing livelihood impacts as a central aim in making recommendations (SL as an ‘approach’);
- In the detail of analysis: exploring livelihood priorities of local people and how they are affected by the projects (SL as an analytical tool).

For AWF, the first use was perhaps the most successful. The importance of understanding and responding to livelihood priorities has clearly emerged and is influencing AWF work in other ways. Although the methodology itself is unlikely to be replicated in full as it stands, as understanding of livelihoods approaches broadens, elements will be used as appropriate.

The importance of understanding and responding to livelihood priorities has clearly emerged.

In the detailed analysis, the livelihoods framework and range of methods were helpful for understanding complex types of impact. They represented a useful contrast with existing approaches to reviewing conservation and development projects. The analysis also revealed new insights and project staff found it helpful for identifying possible changes in implementation (see Box 10). The results of the analysis were probably more useful to project staff than to the AWF in providing generalisations or aggregation regarding the broader impacts of wildlife enterprises in the region. One problem lies in the diverse and unquantified nature of the results, another in the difficulties of implementing the methodology in replicable ways by NGO staff. Nevertheless, using any methodology drawing on conventional or participatory evaluation approaches, it would have been difficult to find the balance between compatibility of objective data and capturing the realistic complexity of development impact. The use of an SL framework at least provides a common structure for comparing unquantifiable impacts, and demonstrates an approach that seeks to get close to ‘development impact’ according to local perceptions.

Box 10 New insights for project staff from the SL approach

At Arabuko Sokoke, two of the clearest benefits of using the SL approach provided were:

- It provided a more finely-textured analysis of impact. The main source of documented information on project impact previously came from a 1997 household survey, commissioned by the project. The survey of participants and some non-participants focused mainly on incomes earned from butterfly farming. It concluded that butterfly income was equivalent to 87% of agricultural income for participating households (Maundu 1997). This was welcomed as very positive impact. The 1998/9 SL analysis produced more detail, focusing on differences between butterfly farmers in their income, and on a wider range of both positive and negative impacts for farmers (high risk, low impact on other activities, increased access to external institutions). This is more difficult to summarise in publicity material, but is useful for project staff and participants.
- It helped explain why some participate more than others. The review identified that the *risk* involved in butterfly production was a particular problem for poor farmers, and was probably affecting their participation. Project staff identified this as a useful insight (I Gordon pers comm).

6.3 Weaknesses of an SL approach

6.3.1 Complexity

Any tool will have weaknesses. The SL framework attempts to manage complexity by creating particular ‘categories’ within livelihoods. This led to the analysis of impacts on each component: impact on assets, impact on existing activities etc. However, this poses the risk of simply adding another level of analysis with artificial distinctions and too much complexity for use by policy-makers and project staff/partners.¹⁰ The ‘solution’ is likely to lie in using the SL framework flexibly according to circumstances and in seeking ways to simplify the methodology, render it more practical and make the results generalisable and comparable. In the field, the most important thing is to keep in mind what is needed, and to remain flexible about how to get there. In the analysis, the key is to probe for significance to peoples’ lives and make *best use* of the information gathered.

6.3.2 Gaps

A more immediate problem is that there are certain ‘gaps’ in the framework: things that do not fall easily into one category or another. For example, power, politics and empowerment issues are not explicitly addressed in the framework, though they are critical in defining the livelihood options available to people. Though these themes are not totally absent, given their importance, it may be necessary to bring them to the fore to ensure that they are not overlooked. This represents a particular challenge in the case of non-quantifiable issues such as empowerment, gender relations, esteem.

- *Empowerment.* The various components of empowerment can be easily placed within the livelihoods framework. For example, increased skills and confidence represent an increase in human capital. Stronger community organisation and cohesion is an expansion of social capital. The ability to influence external forces is a strengthening of the feedback link from people’s activities to the external structures, organisations and processes. Empowerment itself can be included in the desired livelihood outcomes. However, these issues risk getting lost within the framework and within this methodology, because they are not clearly flagged, and because so far

¹⁰ But at least this avoids an alternative problem: that insufficient effort is devoted to data analysis, leaving a mass of unstructured information.

the livelihoods framework has been used to broaden out the focus from tangible cash benefits. Measurement of social impact is, in any case, a complex issue.

- *Politics*. Closely related to the issue of empowerment is that of the impact of politics on livelihoods. Political ideologies, allegiance to political parties and political decisions made by the authorities can be key determinants of livelihood choices and impacts. Yet the place of politics is unclear in the SL framework used by the AWF (as well as in the original DFID framework). One option would be to consider political influence as a sixth form of capital; but at the same time political systems are also transforming structures and processes that mediate access to resources. More thought should be given to this issue, recognising the complexity of power whilst also accepting its essential nature: power *to* act; power *over* structures and processes and so on.
- *Transforming structures and processes* (referred to as external policy and institutions in the AWF methodology). Transforming structures and processes appear explicitly in the framework, but they failed to emerge strongly in the methodology as applied at Abrabuko Sokoke and Il Ngwesi. Two issues require investigation: the impact of a project on the structures and processes that influence livelihoods and the influence of the structures and processes on the project itself.

Box 11 Lessons from the application of the SL framework in Mali

The main lessons Brock draws from her experience in terms of use of the SL framework are:

- It is vital to highlight issues of livelihood diversity and complexity;
- The SL framework is perhaps more useful for action and development projects than for research, and is an appropriate tool for analysing / monitoring interventions so as to assess their impact on livelihoods;
- The SL framework can be used at all stages of the project cycle – from project design, through to monitoring, indicator development and evaluation;
- There is more hope of making the process participatory if the use of the framework is linked to action rather than to research – the design and implementation of a specific project. Hence its application in impact assessments is likely to be appropriate.

Source: Brock (1990)

6.3.3 Indicators

One problem that immediately arises in assessing impacts on livelihoods is ‘what to measure?’ What are relevant indicators of improved livelihoods or sustainable livelihoods? An initial attempt at participatory indicator setting during the case studies generated results that were too vague to be useful. But ideally such indicators should be agreed at the start of a project and monitored throughout. As this was not going to be feasible, the attempt was not pursued further. Furthermore, for most participants the issue was how the project ‘fitted’ with their livelihoods – enhancing or constraining them – rather than demonstrably changed them. Indicators were therefore less relevant. For a minority, participation in the project had changed their level of livelihood security. To assess this, the research team used indicators that had been given as criteria for distinguishing poor and not-so-poor in wealth ranking, such as eating 3 meals a day, ability to purchase land, and afford a bride price to get married.

A second concern, with respect to indicators, is to establish causality. This is always an issue in assessment and, in fact, participatory methods are at something of an advantage here. If used appropriately, flow diagrams and similar tools can help establish which impacts are linked to particular project interventions.

A third concern is that projects may produce impact over both the short and the long term. It is extremely difficult to make reliable projections of future impact and a danger may be that we attribute

value to possible future impacts that never occur. More work needs to be done to understand how long is required before livelihood impacts can really be assessed.

6.3.4 Subjectivity and lack of comparability

People's 'sense of well-being' is a critical factor in assessing the sustainability of livelihoods. This is necessarily a subjective judgement. Although various participatory methods can help to define well-being, a problem arises in that perceptions can change rapidly for any number of reasons. This means that results can vary day by day, week by week, and therefore may only be valid over the short-term. In addition, since perceptions vary from place to place, person to person, it will not be possible to make comparisons across areas/enterprise in the absence of some common indicators. As noted in the case studies (and confirmed by Brock, 1999: 13), even ranking does not make possible the aggregation of results and comparison across projects.

Drawing on the points in Sections 6.2. and 6.3 above, Table 9 summarises the strengths and weaknesses of the livelihoods impact assessment approach.

Table 9 Key strengths and weaknesses of livelihoods impact assessment

| STRENGTHS | WEAKNESSES |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • Focus on livelihood outcomes rather than achievement of project objectives • Focus on a range of impacts important to people's lives, not just on cash or physical outputs • Forces implementers to learn from participants which types of impacts matter to them. Uses a range of participatory techniques to establish people's priorities • A tool for exploring complex impacts at the local level while also identifying macro influences and macro-micro links • Encourages cross-checking of different types of data (qualitative/quantitative; subjective/objective), improving relevance and reliability of results • Understanding of livelihoods is likely to help explain why different groups do or do not participate • Likely to identify ways in which a project intervention can be adapted to enhance impacts and/or participation • Helps ensure field results are <i>analysed</i> and interpreted for their significance, not just aggregated and summarised | <ul style="list-style-type: none"> • Unlikely to provide clear quantifiable conclusions. Can result in a mass of grey 'pros and cons'. • Results unlikely to be comparable and replicable due to heavy reliance of participatory techniques and qualitative data. • Difficult to generate generalised, sector-wide, and national level policies as required by national government and donor policy makers • Focus on local complexities can mean insufficient attention to external policy/institutional factors • Analysis of a mass of data is difficult, and can be useless if done badly • Risk of over-reliance of SL framework, and hence failure to overtly address issues of politics, empowerment, gender relations, esteem, participation, rights etc. • Requires multi-disciplinary skills, and considerable skills and resources for analysis |

NB: it is hard to distinguish between weaknesses in the methodology per se and weaknesses in how it was specifically applied due to the approach of those using it.

These can be compared with similar concerns raised by Brock in her livelihoods work in Mali (see Box 12 below).

Box 12 Advantages and disadvantages of an SL-approach to rural research in Mali

Brock found that the SL framework could be usefully applied to different situations and groups of people in order to describe and understand the complexity of livelihoods. However, despite the broad validity of the information generated, the framework and approach also had disadvantages and weaknesses. Some were highly specific. Others, more general, reflect some similar concerns to the AWF experience, despite the differences in the use and objectives of an SL approach in Brock's research.

Comparability: Comparability of themes and research frameworks does not ensure comparability of analysis and results. It was very difficult to achieve comparability, both across the two sites in Mali, and with the sites of the related studies in Bangladesh and Ethiopia. This difficulty was exacerbated by the fact that different teams tended to emphasise different aspects of livelihoods. This issue should have been given far greater consideration at the pre-fieldwork planning stage.

Data management: So much detailed and complex data was generated that analysis was slow and complicated, and results were delayed.

Ethics: There is an ethical question about local people giving up large quantities of their valuable time without any remuneration, either direct or downstream (this was purely a research project).

Limitations of extractive research: The research findings represent a consultation with local people, during which they shared certain aspects of their livelihoods. However, the analysis of this shared information was not shared, neither was the planning of any action resulting from the research process. The use of the Sustainability Ranking provided a case in point: the method was adapted from a tool often associated with participatory methodology, but the tool itself was not used in a participatory way (ranking of local households was not undertaken by local people). If the tool had been used in a participatory way, local people and researchers would have engaged in a different process of sharing information, almost certainly resulting in a different understanding of the dynamics of sustainable livelihoods.

Use of findings: The general, analytic findings of the research – such as the importance of institutions in mediating access to resources, and the importance of linkages and trade-offs between different strategies in constructing livelihoods – are broadly applicable to many contexts. Specific findings, such as the exact institutional configurations surrounding access to water in Dalonguebougou, or the benefits of living in a complex, multigenerational household, or changes in millet yield, should only be transposed on to other contexts with extreme caution. In terms of policy implications, this suggests that the work could be most usefully used either to inform a direct intervention in the village itself, or to inform a broad approach to project design and community appraisal, but not as a contribution to describing livelihoods at an aggregate (regional or national) level. This implies a difficulty in making the link between micro and macro, between local realities and broader policy issues.

Source: Brock (1999)

7. Conclusions

Although the methodology described in this paper is still evolving, the results of the two case studies clearly demonstrate its strong potential. The SL approach can certainly be applied to project impact assessment. The wildlife enterprise methodology developed here shows ways in which this can be done, provides case studies of how it was implemented in practice, and indicates that it was found new and useful – but also in some ways difficult. A number of lessons can be identified (Section 6) concerning how to apply the approach and its strengths and weaknesses.

One of the greatest benefits of the methodology is that, at a very general level, it highlighted the importance of focusing on livelihood priorities within development and conservation projects. More specific advantages of its application can be summarised as: a shift away from narrow project evaluation criteria; a rich contextual and project level analysis; an ability to identify and analyse key assets and activities critical to livelihoods; an analysis that can determine whether a project intervention demonstrates a true or close fit with livelihoods; a basis for practical recommendations to enhance livelihood impacts on and participation of key groups.

However, a number of challenges and methodological issues have emerged for consideration: the difficulty in obtaining data that is comparable across contexts; the lack of quantitative results for aggregation to the regional or national level; and the need for highly analytical and skilled study teams; difficulties in replicating the methodology. The methodology seems to be more successful in identifying the broad ‘fit’ of project interventions with livelihoods in a particular context than measurable changes in livelihood security and sustainability. The data generated may therefore be more useful at project level than at more macro levels; perhaps a different approach is needed for drawing out broader lessons for national level policy. These difficulties suggest more work is needed to develop ways to apply SL concepts to impact assessment, and to compare and share findings across different initiatives.

Finally, it remains useful to share the approach with others, so long as it is recognised that it has its weaknesses in relation to classic methodologies and that there is always a need to adapt its application to specific contexts. While sharing the specific methods is difficult, sharing the overall approach of prioritising livelihoods has proved more successful and is probably more useful.

Appendix 1 Summary description of the fieldwork at both case study sites

Fieldwork at Il Ngwesi

1) Introductory visit – discussions with key informants and representatives of stakeholder groups. Gain background information on the area and enterprise.

Meetings with local participants:

- Workers at the lodge and lodge manager – discussed functioning of lodge, use of external expertise, and how income is spent;
- Workers at the cultural boma: met elders, women, and young men separately – discussed functioning of the boma, how they got their jobs, how income is spent;
- Leaders within Group Ranch (members of the Board of Directors and Group Ranch Management Committee) – discussed functioning of the Group Ranch, decision-making and distribution of benefits of the lodge.

Meetings with external participants:

- Conservation officials (Kenya Wildlife Service (KWS)) – discussed background on project, KWS objectives, input and perspective on impacts;
- Laikipia Wildlife Forum representative – discussed LWF objectives and how Il Ngwesi fits in;
- Lewa Wildlife Conservancy – discussed type and amount of support provided to the Il Ngwesi enterprise, Lewa objectives and perspective on impacts. Collection of some financial data.

2) Second visit – to collect financial information and to set up third visit for participatory livelihood assessment and stakeholder analysis.

3) Third visit – main fieldwork. PALI group meetings for participatory livelihood assessment and review of lodge impacts. Five separate meetings doing similar activities at 5 neighbourhoods:

- Wealth ranking of households within the neighbourhood
- Listed current livelihoods activities
- Listed household needs. Constructed matrix showing which activities meet which needs
- Discussed pros and cons of the lodge
- Identified distribution of costs and benefits across stakeholder groups. Discussed why

Plus

- Observation (e.g. of whether schools that received lodge funds were built/operating);
- Meetings with other stakeholder groups, including women, lodge workers and members of Group Ranch Management Committee;
- Meeting with Cultural Boma Committee was disrupted by security problems elsewhere in the Group Ranch.

4) Household survey of:

- Employment, income sources, expenditure
- Awareness of lodge, ranking of impacts, employment in lodge
- Involvement in decision-making for the lodge or group ranch
- Contributions to harambee (collective fund-raising)
- Wildlife and conservation. Experience of wildlife damage

Key secondary information used before and after the fieldwork included:

- Financial and economic analysis of wildlife in Laikipia (AWF)
- PRA done by Kenya Wildlife Service
- Socio-economic strategies of pastoral households in Mukogodo (Herren)

Appendix 1 continued

Fieldwork at Arabuko Sokoke

1) **Initial visit** to make contact, gather background information and set up second visit.

2) **Main visit:**

Meetings with external stakeholders

Project management, Kenya Wildlife Service, Forestry, Birdlife – to discuss project history, institutional objectives and perspective.

Meeting with Group Representatives (leaders of farmers)

Introductions including good and bad events – context setting. Pros and cons of butterfly farming (in 2 groups, with report back and discussion). Ranking of expenditure of butterfly income on different items (using leaves and symbols on the ground). Discussion of changes over time in work and income.

PALI meetings with butterfly farmers

two meetings held, with members from 2–4 butterfly farming groups at each:

- Historical time line, discussion of change
- Discussion of coping strategies during drought (linked to time line)
- Listing sources of income, comparison (pros and cons), ranking as source of income last year (in male and female groups with report back).
- Working groups according to scale of production (small, medium, large) to discuss butterfly production, income, expenditure, and pros and cons.
- Break-away discussions with individuals e.g. on wealth ranking, time input, production losses.

Meeting with private butterfly producer

Discussed structure of the business. Key factors affecting profitability.

Meeting with Location Chief

Livelihood strategies, wealth categories, forest conservation, price information.

Meeting with non-participants

Two meetings were held in 2 locations [correlating with the meetings with members], with some difference in structure and content. Individual discussions were also held at nearby homesteads) Main issues included:

- Livelihood activities
- Perception of butterfly farming
- Attitude to forest conservation

Collection of financial data

At project office in collaboration with project staff.

Follow-up discussions with butterfly farmers

To fill gaps, e.g. whether/how choose species to farm, whether know about money in group account, attitude to forest.

Feed-back meeting to project staff

Summarise main impacts – financial, livelihood, development, conservation. Discussion of key issues.

Key secondary sources used before and after the fieldwork:

1993 and 1997 surveys for the Kipepeo Project

PRA reports done by the project at 2 locations

Livelihood-PRA tools from Rennie and Singh 1995

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